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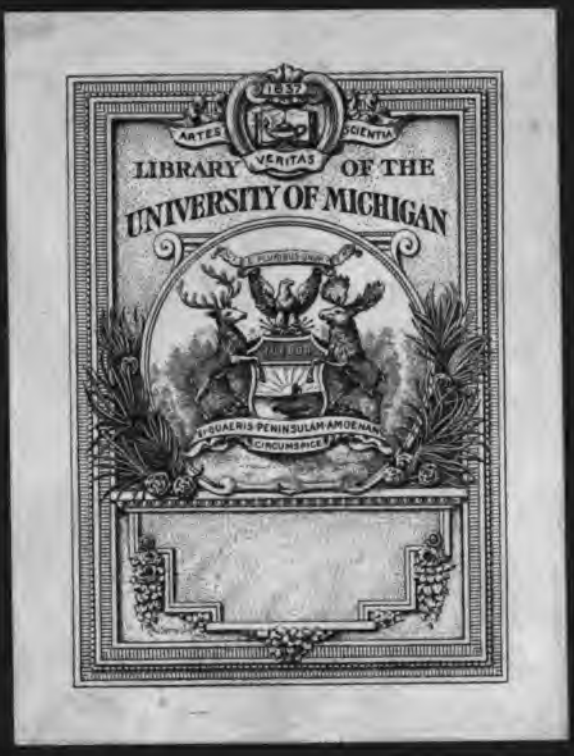

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JAMES H. HUTCHINSON, M.D.,
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THE MEDICAL TIMES.

SATURDAY, OCTOBER 1, 1870.

ORIGINAL LECTURES.

CLINICAL LECTURES

ON THE TREATMENT OF STRANGULATED HERNIA.

BY S. D. GROSS, M.D., LL.D.,

Professor of Surgery in the Jefferson Medical College of Philadelphia.

No. I.

HAVING recently had several cases of strangulated hernia at our clinic, it is my desire, this morning, to offer some comments upon the subject, using the cases incidentally as means of illustration. My impression, from what I have seen of this affection, has long been that its treatment, to which it is my intention, on this occasion, in great degree to limit myself, is by no means so well understood by the great body of the profession as it ought to be. The very word by which this form of hernia is designated carries with it, in the minds of most practitioners, something terrifying; and it is, therefore, not surprising that they should approach such cases with great timidity, if not positive reluctance and misgiving as to the result of their efforts to afford relief.

It must be borne in mind, as a matter of great practical moment, that there are two distinct varieties of strangulated hernia, the acute and chronic, or, more properly speaking, the sudden and gradual. These expressions sufficiently explain themselves, and yet their import is not always, if indeed generally, duly weighed in practice. Acute strangulation is most common in hernia of recent standing and of small size; the tumor has, perhaps, attracted little if any attention; there has been no pain or, indeed, even any serious inconvenience; the patient is simply conscious that there is a little swelling in the groin, readily receding during recumbency and readily reappearing in the erect posture. Suddenly, under the influence of some bodily exertion, as jumping, straining, or lifting, he is seized with pain and uneasiness in the tumor, and with inability to push it back, although he may, while making the effort, lie upon his back and employ some force to effect his purpose. The swelling, instead of being soft and elastic, as it was a short time previously, is firm and tense, as if it were tightly distended, as indeed it is, if it be mainly composed of bowel; the local distress rapidly increases, both in extent and severity; abdominal tenderness soon supervenes, and a sensation is experienced as if a cord were drawn tightly around the hypogastric region. The movements of the body are more or less painful, the bedclothes are too heavy for comfort, and the lower extremities are instinctively flexed in order to relieve the tension of the abdominal muscles. The bowels are obstinately constipated, and, as the propulsion of their gaseous and liquid contents is arrested at the seat of the stricture, colicky pains are superadded to the other suffering. The stomach speedily sympathizes with the constricted intestine, the effect manifesting itself in the first instance by nausea, and soon after by vomiting, at first of the ordinary contents of the organ, whatever these at the time may happen to be, and subsequently of stercoraceous matter. Along with these symptoms there are great thirst, excessive restlessness, and a constant desire for cold air, with an excited and corded state of the pulse, pinched features, and exquisite tenderness of the entire abdomen. If prompt relief be not afforded, gangrene ensues, and the patient either perishes or, what is almost worse, an artificial anus forms and a miserable existence is eked out.

Such is a rapid sketch of what is justly denominated acute strangulation, an affection which not unfrequently runs its fatal course in less than twenty-four hours,—nay, occasionally, indeed, in less than half that time. The variety of hernia most subject to this extraordinary progress is the femoral; but I have also witnessed it in the inguinal and even in the umbilical.

In the milder forms of strangulation, not unfrequently called chronic, the whole course of events is different; the tumor is generally old, more or less bulky, and partially, perhaps completely, amenable to retentive measures. Strangulation occurs gradually, not suddenly, as in the acute form of the affection, caused, it may be, by bodily exertion, or simply by the pressure of the abdominal viscera at a moment when the parts are not adequately supported by the truss, too old and weak any longer to answer its proper purpose. Although the patient is unable to reduce his rupture, he feels no immediate concern; he experiences no pain, and he flatters himself that the parts will by-and-by recede of their own accord. After the lapse of some hours, finding that there is no likelihood of spontaneous reduction, he seizes hold of the tumor, and for the first time perceives that it is sore and tender, without any disposition to restoration under the pressure of his fingers. The affection progresses; the characteristic symptoms of strangulation, local and constitutional, gradually set in, but several days elapse before they become urgent, and if the case be left to itself it may not terminate fatally or in the establishment of an artificial anus for the better part of a week. Indeed, it is surprising how long a patient may occasionally live under such circumstances.

There is thus, it will be perceived, a wide difference in regard to the progress and symptoms of these two forms of hernia,—a difference which necessarily suggests a difference of treatment for their relief. The one brooks no delay, whereas the other is often materially benefited by it. I have thus been particular in drawing your attention to this subject, which, as you will at once see, is of the greatest practical consequence. If this distinction were more generally recognized and acted upon, the death-rate of strangulated hernia, both in private and hospital practice, would, I am sure, be much diminished.

The methods of reduction in acute and chronic, or rapid and gradual, strangulation do not, as I endeavored to explain to you on a former occasion, materially differ. In both cases the object should be to liberate the constricted intestine at the earliest possible moment, before it has suffered any serious detriment, endangering its vitality or the patient's life. The acute form of the affection does not, as I have already said, admit of delay; the lapse of a dozen hours may be fatal both to part and system. Everything depends upon the correct understanding of the case and the prompt application of the surgeon's art. When this is properly directed, provided no precious time has been lost, a recourse to the knife will seldom be required. I speak advisedly upon this matter. In a practice of upwards of a third of a century, in which I have had my share of cases of strangulated hernia, it has not often been my lot to be compelled to resort to instrumental interference. With the aid of chloroform, which I always prefer to ether, as it is less liable to cause nausea and vomiting, and a proper position of the patient, almost any rupture, however severely strangulated, may, in its earlier stages, be successfully reduced in a few minutes.

There are certain preliminaries in the treatment of strangulated hernia which, if properly attended to, will greatly facilitate the efforts of the taxis. These have reference mainly to the bed- and body-clothes, the condition of the bladder, and the patient's posture. A firm, smooth mattress is far more suitable than a feather bed; when this cannot be obtained, the patient should

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be placed upon a narrow table, or, what is preferable, upon a settee, or even upon the floor; no clothing should be allowed beyond the shirt or chemise; the urine, if need be, should be drawn off by the catheter, and if the large bowel is much distended it will be well to evacuate it with a stimulating enema of turpentine and castor oil. The system being thoroughly under the influence of chloroform, the next point is to relax the abdominal muscles, by free elevation of the head and shoulders, and by flexing the thighs as completely as possible upon the pelvis. In some cases it is necessary even to raise the hips. The thighs should be held rather close together than otherwise. There should, let me repeat it, be no halfway business with the chloroform. Nothing short of complete anæsthesia will answer the purpose. If the patient vomit while the taxis is in progress, the efforts must be momentarily suspended.

Everything being thus arranged, the surgeon, standing at the right side of the patient, grasps the tumor with his right hand, seizing it in such a manner as to enable him to draw the contents gently away from the opening through which they have descended. This, I conceive, is a very important step in the operation, and one that should always be executed with the greatest possible care; otherwise it might be attended with rupture of the bowel, especially when the strangulation is unusually firm or has existed for an unusual length of time. The hand, still grasping the tumor, is now employed to compress it, not rudely or by fits and starts, but in as steady, gentle, equable, uniform a manner as possible, the surgeon never for a moment losing sight of the important fact that he is dealing with inflamed and perhaps partially softened structures, liable, if not to rupture under the force of his manipulation, at all events to be seriously injured, if the pressure be too violent or improperly directed. Gradually, as the operation progresses, it will be found that the tumor begins to yield, generally first at its neck, by the escape of a little pent-up gas or fluid matter, and, after a little further effort, of its more solid contents. The return of the parts to the abdomen is generally accompanied by a peculiar gurgling sound, which, with the effacement of the swelling, is a sure sign of the success of the operation. It is only, or mainly, when the contents of the tumor consist exclusively of omentum, or when, as will be hereafter seen, they are pushed behind the peritoneum, between this membrane and the transverse muscle, that the sound in question is absent.

When the tumor is very large, as in scrotal hernia, it may generally be advantageously compressed simultaneously with both hands. Most commonly, however, no matter what may be its bulk, I grasp and hold it with one hand and use the thumb and fingers of the other for compressing the neck of the swelling, or that portion which lies nearest to the opening of descent, and consequently close to the seat of the stricture. Such a procedure is always of great use in emptying the bowel, whatever may be the size of the rupture. When the hernia is very small, pressure of the fingers takes the place of compression of the hand. The effect of this pressure upon the tumor and its contents may be compared, not inaptly, to that which is exerted upon the child during the progress of parturition by the contraction of the uterus. It is chiefly expellant.

These efforts, it may now be stated, should always be made in the direction of the descent of the hernia. In inguinal hernia of long standing, with unusual bulk, we can hardly go amiss in making it in a straight line, that is, directly from below upwards, owing to the changes which always take place, under such circumstances, in the relative position of the inguinal rings. In opposite conditions, as when the anatomy of the parts remains unaltered, the contents of the tumor must be pushed in an oblique direction. I am now speaking of these manipulations only in a general point of view. To particularize would carry me into the details of hernia as it occurs in different regions of the body.

The rules now laid down are, it will be seen, remarkably simple; indeed, it is difficult to conceive how they could be more so; and yet they are either not generally understood, or so awkwardly applied in practice that failure would seem, with many surgeons, to be the law, and success the exception. That this is the case I am led to believe from what passes so constantly around me, and from the reports in medical journals, both domestic and foreign, of the numerous operations performed for the relief of strangulated hernia. Perhaps one great reason why success does not more frequently attend the employment of the taxis is that most practitioners are destitute of experience, and consequently timid in the exercise of the requisite manipulations. Some men, too, naturally possess more tact than others, giving them thus a decided advantage over their confrères.

Although the supine posture is undoubtedly the most eligible for the speedy and satisfactory reduction of strangulated hernia, yet the judicious practitioner will not limit himself to it. On the contrary, he will not unfrequently find it useful to depart from it, and sometimes, especially when the symptoms are not urgent or the affection is not of long standing, he will even permit the patient to try his own hand at the reduction. I have repeatedly met with instances in which the patient's efforts were promptly successful after those of the surgeon had signally failed. The reason is obvious:—the surgeon is timid, inexperienced, awkward, if not positively bewildered; nay, it may be his first case. The patient, on the contrary, has perhaps been again and again in a similar condition, and, having often relieved himself before, his efforts are again crowned with success.

Inclining the body strongly to one side or the other occasionally greatly facilitates the reduction. In some instances the parts readily slip back when the pelvis is as it were thrown into the air, with the limbs strongly flexed upon the abdomen. Occasionally the reduction is promptly effected, after failure in the more ordinary posture, when the patient supports himself upon his knees and elbows. Another method worthy of trial is to apply the taxis while the patient is standing up, with the body strongly inclined forwards, the surgeon standing either behind or in front of him. Again, the object is sometimes more easily accomplished when the abdominal muscles are put upon the stretch than when they are relaxed. In obstinate cases, provided there be no great urgency of symptoms, all these expedients are worthy of trial. The adroit surgeon, like the sagacious general, must know when to make a strategic movement.

How long should the efforts at the taxis be continued? or, in other and more comprehensive language, how long can they be made with safety? Obviously, no definite rule can be laid down here. The nature of the case must determine the rule of action. If the symptoms are unusually urgent, as in acute strangulation, not more than five to ten minutes can be profitably spent in this way without doing mischief; the parts will probably be very tender and intolerant of manipulation, from their irritated and inflamed condition, and therefore unduly protracted efforts at the taxis cannot, under such circumstances, be too pointedly condemned. Instead of persevering in the use of the taxis, two things are to be considered: first, will the case admit of further delay, and consequently of another trial of the taxis, or has the strangulation caused such an amount of injury as to call imperatively for the employment of the knife? These are questions which are not always by any means easily decided. The amount of local and constitutional

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distress is here, I conceive, of far greater weight than the mere duration of the strangulation or the time that has elapsed since the occurrence of the accident. If the symptoms are comparatively mild, if there is little nausea or vomiting, if the tumor is not very tense, painful, or intolerant of manipulation, there is no need of haste. The case admits of delay—of a further trial of the taxis. The contents of the tumor are still safe. The treatment is still expectant, and the first step is to place part and system in a perfect state of rest, to induce them, so to speak, to forget themselves, the surgeon hoping that while they are in this quiescent condition the stricture will relax its grasp and allow the parts to regain their natural position, or, if not thus fortunate, that a slight repetition of the taxis will accomplish the object. Ere yet the patient has, perhaps, fully recovered from the effects of the anæsthetic, a hypodermic injection of morphia is administered, followed by thirty grains of hydrate of chloral; the tumor is covered with a bladder partially filled with ice and placed over a piece of wet flannel; thorough relaxation of the abdominal muscles is maintained; the room is darkened; noise is excluded; and the patient is carefully watched. Sound and protracted sleep will be almost certain to ensue; at all events, perfect tranquillity, that quiet so conducive to relaxation of the system. After some hours,—three, four, five, or six,—the surgeon returns; he places his fingers upon the tumor, and finds, to his joy, that it is not only much less tender, but that it has undergone a marked diminution of tension and even of bulk. He moves his fingers gently over it, and, almost before he is aware of it, up go its contents. In another case matters are perhaps somewhat different. The anodyne and ice have relaxed the parts, but the taxis requires more force, and it may even be necessary to give chloroform again. Still, the operation is comparatively easy; the remedies have produced the desired effect, and the patient is safely relieved without the use of the knife.

The following case beautifully illustrates the value of this expectant practice when no urgent symptoms exist.

A young lady, twenty-two years of age, had labored under femoral hernia of the left side for several years. The tumor, hardly the size of a pullet's egg, had been securely controlled by a truss until the day before I saw her, when, in an attempt at lifting a table, the instrument gave way, and the hernia speedily became strangulated. Alarmed at the occurrence, she sent, a few hours after, for a physician in the neighborhood, who made repeated but fruitless efforts at reduction, both with and without the aid of chloroform. I saw the patient the next morning about nine o'clock; she was restless, and had occasional vomiting, but not of stercoraceous matter; the tumor was tense and tender on pressure. Being fully anæsthetized, I made a careful trial of the taxis, but with no better success than my predecessor. Seeing nothing urgent in the case, I gave half a grain of morphia, covered the tumor with a bladder of pounded ice, and ordered the room to be kept dark and quiet. On my return, at one o'clock, I found that the woman had had a long and tranquil sleep, and, upon making very slight pressure upon the hernia, the bowel slipped up with a distinct gurgling noise. Recovery occurred without a bad symptom.

It will be found, as a general rule, that cold applications make a much more salutary impression upon a strangulated hernia than warm. This is especially the case when the swelling consists mainly or exclusively of intestine. When the contents are omental, the effect is usually much less apparent. Ice, properly pounded and inclosed in a small bladder, is the most reliable agent. It should not be placed directly upon the skin, but through the medium of a piece of wet flannel; and great caution should be observed in its use, lest it should cause congelation and gangrene. When ice is not procurable, some refrigerating lotion should take its place.

Warm applications are most beneficial in weakly, anæmic persons of a nervous, hysterical temperament. Their use may often be advantageously combined with anodynes, and even with astringents, as sugar of lead or Goulard's extract, especially when the contents of the hernia are a good deal inflamed and tender. The most suitable applications of this kind are flannel cloths, properly folded, wrung out of hot water, simple or medicated, overlaid with oiled silk to retain the heat and moisture, and arranged so as to cover the whole abdominal surface. The applications should be maintained without intermission for a number of hours; otherwise little benefit will accrue.

A tobacco poultice has sometimes been beneficial in unlocking the stricture in strangulated hernia; but I have no experience with the remedy, and if I were to employ it I should watch its effects with the greatest possible vigilance.

Tobacco enemas are no longer employed as auxiliaries to the taxis; and, as to purgatives and emetics, they are, of course, out of the question.

Leeches and venesection are less employed at the present day than they should be. Independently of their relaxing effects, their use is clearly indicated whenever strangulation coexists with great local tenderness and a decidedly plethoric condition of the system. Their judicious employment under such circumstances cannot fail to diminish, in a marked degree, the dangers of gangrene in the protruded structures, and the occurrence of general peritonitis.

The warm bath is no longer used as an adjuvant to the taxis in strangulated hernia, chloroform having advantageously superseded its employment. In former times it was not uncommon to parboil the patient when thus affected, in the hope that, by relaxing the system, it would relieve stricture and thus facilitate the restoration of the hernia.

As to anæsthetics, I give a decided preference, in this form of affection, to chloroform over ether. While, with proper care in its administration, it is equally safe, it possesses the important advantages of greater promptness of action, and much less liability of unpleasant and protracted secondary effects, as nausea, vomiting, headache, and mental and bodily depression. Vomiting, in particular, should be sedulously guarded against in the treatment of strangulated hernia, on account of its injurious effects upon the constricted bowel, and the danger of a recurrence of the protrusion.

Chloral promises to be a most valuable remedy in the treatment of strangulated hernia, rapidly inducing sleep, and thus aiding powerfully in the relaxation of the system. It should be given in full doses, as thirty grains; and, if much pain exist, its beneficial effects will be greatly promoted by the co-operation of a hypodermic injection of morphia.

The late Dr. Seutin, Professor of Surgery in the University of Brussels, practised for many years, as an auxiliary to the taxis, partial rupture of the stricture. For this purpose he was in the habit of insinuating the point of the index-finger between the tumor and the point of resistance, and then, by a gradual but forcible effort, lacerating the stricture. I have repeatedly tried this expedient, but have seldom realized from it the advantages ascribed to it by the Belgian surgeon. From what I have seen of it, I am led to believe that it is chiefly applicable to cases of large hernia, tolerant of pressure and attended with comparatively little resistance at the seat of stricture. Under opposite circumstances it will generally fail, and might, besides, if not employed with great care, be followed by rupture of the bowel, especially when there is great distention from gaseous and fecal accumulation.

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CLINICAL LECTURE

ON A REMARKABLE CASE OF DILATATION OF THE VEINS OF THE TRUNK AND UPPER EXTREMITIES.

BY ALFRED STILLÉ, M.D.,

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GENTLEMEN:—I ask your particular attention to the patient before you and to the analysis of his case; for the first is unusual, and the second will, I hope, illustrate the value of the *method by exclusion* in arriving at a probable diagnosis in obscure diseases.

J. H. was born in Ireland, is 51 years old, a laborer, married, and of temperate habits. He arrived in this country twelve years ago, and continued healthy until a twelvemonth since, when, after exposure to wet and cold, he began to cough, and had yellow sputa, but was not confined to bed. The cough lasted for nine months with almost its original severity, and then declined in urgency, but it still continues to be more or less annoying. There has been no hæmoptysis, but a progressive loss of flesh, which, however, is conspicuous chiefly in the lower limbs; they seem shrunken, while the face is full and even somewhat florid. The appetite and digestion are generally good; the bowels not very constipated; headache or giddiness has not been experienced.

On admission to the hospital he complained of sore throat and a difficulty of swallowing, resulting from a recent cold, and from these symptoms he was soon relieved; but the pulmonary expectoration became more constant, and the sputa were copious, dense, opaque, and greenish-yellow.

It is now a little more than a month since his admission, and his present condition may be described as follows: The *face* appears to be somewhat swollen, and is florid, but does not pit on pressure. The *eyes* are watery; *tongue* normal; *general condition* that of emaciation, but the arms appear to be less wasted than the legs; the strength of the latter seems unimpaired. The superficial veins of the upper limbs are very prominent, those of the lower extremities are scarcely visible. The femoral arteries pulsate strongly and tensely, and the internal inguinal glands are slightly enlarged. The internal saphena vein feels like a hard cord, and the same condition prevails throughout the superficial veins of the lower extremities; these vessels are not, however, impervious; on being emptied by pressure they rapidly refill. The abdomen is normal in size, shape, and sensibility; the epigastric veins are prominent, and their tortuous branches anastomose with the mammary veins, which are in like manner enlarged, and at several points their finer branches form varicose patches. The superficial veins of the neck are also distended, but not in the same proportion as those of the trunk; the veins of both upper extremities are equally enlarged, but are not rigid; neither are those on the anterior surface of the trunk, nor on its posterior aspect, which are likewise distended.

Percussion of the chest on the right side everywhere shows decidedly diminished resonance as compared with the left; and the expansion of the right side during full respiration is greatly less than that of the opposite side. On *auscultation* of the left lung the respiration is mainly puerile, while on the right side it is in general faint, harsh, high-pitched, and bronchial in character; but in the lower half, very feeble, and towards the apex expiration is much prolonged. Sonorous and other associated *rhonchi* are at times abundant throughout the left lung, but coughing generally causes them to cease. Near the apex of the right lung subcrepitus may be transiently heard.

The *heart* and præcordial region present no peculiarities except that the respiratory murmur can be heard, and a clear percussion sound elicited, over the entire organ. The *liver* extends from the sixth rib to a line two and a half inches beyond the edge of the chest. There is no tumor and no unnatural pulsation, nor any murmur, in the course of the aorta.

Such is very summarily a description of the past and present condition of our patient. Please to notice the emaciation of his lower limbs, the relative fulness of the upper portion of his body, and the distention of the superficial veins. The contrast between the two opposite portions of the body is very remarkable; the full and almost florid appearance of the face would not prepare you for discovering the exiguity of the legs. The face is full and round; it is not pale nor œdematous, for when I press upon it no indentation is left, and the bright color which is expelled while the pressure lasts instantaneously returns. The arms, too, you will remark, are not emaciated as the legs are, although they are to some extent wasted, and they present a still more remarkable contrast to the legs in the fact that all of their veins are dilated to an unusual degree. Observe, further, the varicose condition of the veins of the trunk, as it was described in the notes. The results of percussion and palpation of the liver, as there presented, would, at first sight, seem to show that the liver is enlarged. But this interpretation is not a legitimate one. Observe that the percussion sound elicited from the right lung above the line of hepatic dulness, and which is not positively, but only relatively, resonant, extends very low down, even to a line which traverses the centre of the epigastrium. And observe, also, that the zone of absolute flatness below this line, and which must represent the thickness of the liver, is not more than three inches wide, or, in other words, of an extent which may very fairly be taken to represent a liver of the normal size. It appears, then, that the projection of the liver beyond the ribs is owing not to an enlargement of that organ, but to a displacement of it by pressure from above,—that is to say, by pressure from within the chest. And when we observe that the right side of the chest is contracted, and that the action of the corresponding lung is interfered with, it becomes evident that the liver is thrust downward by the contracted lung, so as to be felt beyond the base of the chest.

But what, you will ask, has this demonstration to do with the dilatation of the superficial veins which is observed in our patient? It would be strange if they had not some relation to one another, for until the acute attack of pulmonary disease the man enjoyed excellent health; and, since that occurrence, he has never been well, and the symptom which we are aiming to explain has made its appearance. When it did so cannot be precisely determined, for the man himself was not aware of its existence; but he assures us that he suffered no pain or palpitation of the heart, had no swelling of the feet, nor any symptom which could be directly referred to the central organ of the circulation. What, then, I repeat, is the cause of this singular distention of the veins?

It is plainly due to some obstruction of the circulation through those vessels. Every one who has attended the clinics of a large hospital grows familiar with a form of enlargement of the superficial veins of the abdomen and the adjacent portion of the thorax, which is associated with and caused by cirrhosis of the liver. In that case an obstacle to the circulation of the blood in the portal vein and through the liver throws the current into the superficial channels, the epigastric and mammary veins. But in the present case there is no evidence to prove that the liver is either contracted or distended, but proof only that it is displaced. There is no dropsy of the peritoneal cavity, which there would almost inevitably be if such an enlargement of the abdominal veins as we here observe were due to hepatic obstruction. It follows, therefore, that there is no evidence to prove that the liver is cirrhosed in the case before us. But more than this: even if cirrhosis of the liver existed, and caused the dilatation which we observe of the abdominal veins, it could in no wise explain the other and much more singular dilatation of the veins of the upper extremities. Consequently both positive and negative evidence disprove the presence of a cirrhotic liver in our patient's case.

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Nevertheless, as was before remarked, it is evident that the circulation of the blood through the main venous channels of the trunk is in some manner hindered, and it is equally certain that the obstacle must be seated either in the veins or upon them. Cases of the former class are numerous, the most common being due to the formation of a clot from phlebitis; but the symptoms of that affection are severe and peculiar, and none of them have existed in our patient's case. As to external obstacles: pressure upon the vena cava may be exerted by various tumors, as aneurisms of the great arteries along the course of the vein. Cancerous, scrofulous, and other tumors of the posterior mediastinum may compress the veins in question. Have we any evidence that an aneurismal tumor exists here? We have examined all of the large arteries and discovered no evidence of disease in any of them; neither hardening nor any murmur. This evidence is, indeed, very indirect; for an aneurismal tumor may affect the thoracic aorta without betraying its existence by a single rational symptom or physical sign. But with such possibilities we have, at present, no concern; we have only to inquire whether the phenomena of the case before us can be explained by the supposition of an aneurism of the thoracic aorta. Now that portion of the great artery lies well to the *left* of the spinal column, and an aneurism of moderate size affecting it could, therefore, not possibly press upon the ascending and descending venæ cavæ which lie upon the opposite side of the bodies of the vertebræ. And if it were of such size as to exert pressure upon so comparatively distant an organ, it must also, of necessity, reveal its dimensions and nature by disturbing the functions of the lung, by its pulsation, percussion dulness, thrill, and other signs of superficial aneurisms. None of these signs are present here, and therefore the supposition of an aneurism may be dismissed. Again, is a cancerous mediastinal tumor the cause of the appearances we are studying? There is nothing in the history of the patient to suggest such a disease, and he certainly presents none of the peculiarities ascribed to the cancerous cachexia; a condition very ill defined, it is true, and often absent in cases of unquestionable cancer. We cannot, therefore, assume the presence of such a disease to be probable here.

On the whole, the hypothesis of a pressure of some sort upon the venæ cavæ appears to be the only tenable one; and, adopting it for a moment, let us see how far it will serve to explain the facts of the case. Pressure upon either the superior or the inferior vena cava alone would be insufficient to explain the enlargement of the veins of the upper extremities as well as of the entire trunk; the pressure, whatever it is, must act upon both veins at the same time. But to do so, where must it be situated? Evidently in the posterior mediastinum, to the right of the spine, in the space which includes the upper and the lower venæ cavæ and a portion, also, of the right auricle, into which they empty. The vena cava superior, you will remember, empties into the upper and right-hand portion of the right auricle; the vena cava inferior empties into the same cavity upon its opposite or lower side; the auricle lies between the two veins and is, indeed, continuous with them. If, now, according to our hypothesis, pressure is made at one and the same time upon both the veins and upon the auricle, it must be made by a body of considerable extent.

Can we, then, form a well-grounded conjecture as to the existence and nature of such a compressing cause in the case we are studying? Going back to the history of its acute phenomena, we again encounter the fact which I have several times emphasized, that the patient suffered from no acute disease except that which we have recognized as pleuro-pneumonia with bronchitis. Can we, in these facts, discover any link between the acute pleuro-pneumonia on the one hand and the distended veins and an obstructed vena cava upon the other? It is not, I imagine, difficult to find. If the patient had an inflammation of the right pleura, it may have produced a very thick plastic effusion along the right side of the spine, within the pleura chiefly, of course, but not impossibly, also, externally to that membrane, on the right side of the posterior mediastinum. This effusion, or exudation, rather, gradually became more dense as the general pleural effusion was absorbed (which we learn from the contraction of the side), and in proportion as it hardened it compressed the venæ cavæ and right auricle, hindered the return of blood through them to the heart, and consequently occasioned a distention to a greater or less degree of the veins of the upper extremities, the head, and the entire trunk. This theory, which is constructed partly out of the manifest physical phenomena of the case, and partly by a process of deduction from results which are apparent in the case, appears to fulfil all the conditions of a sound or true theory, and therefore I adopt it, and ask you to accept it also.

One other point only remains to be noticed, and I dare say it may have presented itself to the minds of some among you as an objection to the theory I have endeavored to establish. The *legs of our patient are not swollen at all, nor are their veins distended.* You will have good reason to suggest this peculiarity of the case as an objection to the view of its nature which has been set forth, and ask how it is possible that the obstruction I have supposed should really exist without occasioning swelling of the legs and distention of their veins. I might give several reasons why it should produce no such effect; they might be good or they might be bad reasons, but I will not use them now, for it is a serious task to attempt to prove a negative. In clinical teaching I imagine that clinical arguments are the best; and I therefore shall quote for you the only case I have knowledge of in which such an enlargement of the cutaneous veins was present as you observe in our patient. Dr. Léon Parisot has published an account of this case, and the following extract from his narrative will exhibit its analogy with our own:

"A woman, sixty-eight years old, died with all the symptoms of rapid congestion of the lungs. She had had a trifling œdema of the left leg. The surface of the chest and of the abdomen was covered with a network formed by distended superficial veins, some of which were as large as a quill. There was no ascites, nor enlargement of the liver, nor any albumen in the urine. On examination *post mortem*, it was discovered that the inferior vena cava was impervious from a point just below the renal veins, and the first-mentioned vessel, as well as the primitive iliac veins, was converted into a fibrous cord."—(*Archives Gén.*, Juin, 1869, p. 742.)

In this example complete obliteration of the inferior vena cava did not occasion dropsy of the lower extremities; there is no reason, therefore, why it should have done so in our own case. If you still desire to have a rational explanation of the peculiar phenomenon which presented itself in both of these cases, the absence of dropsy of the lower limbs although the vena cava was obstructed, you will find it in this consideration, that the obstruction in the main channel of venous circulation must have taken place slowly, and that, just in proportion as it increased, the channels of collateral circulation, the superficial veins of the abdomen among them, became gradually dilated, and that consequently there was at no time such a distending force acting upon the veins as must cause a transudation of their watery contents and the formation of dropsy or even œdema.

I have analyzed the case, gentlemen, and you have the result. If my conclusions are correct, the prognosis is doubtful. If the exudation which I suppose to exist should be absorbed, the circulation may return to its normal channels; but the chances are that the exu-

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dation will become more dense and interfere still more seriously with the circulation than it does at present. The immediate object of treatment should be to remove the bronchitic complication, and thus enable the blood to be more perfectly aerated than it is at present. Since the patient entered the hospital he has used, for this purpose, an emulsion of copaiba, and with decided advantage, so far as his cough and respiration are concerned. In addition, we must endeavor, by good food, and perhaps by tonics, to bring the organic functions into as high a state of activity as possible, and thereby promote the removal of the exudation which we have concluded to exist at the root of the lung, and to constitute, anatomically, the patient's disease.

NOTE. — The subsequent history of the patient, and the mode of his death, which took place several months afterwards, cannot now be determined; nor can any details be given of the examination p. m., except that there was a total absence of all lesions besides contraction of the right side of the chest, old and universal pleuritic adhesions, and a large accumulation of fibrinous exudation at the root of the lung.

ORIGINAL COMMUNICATIONS.

EXCISION OF THE OS CALCIS.

BY HUNTER McGUIRE, M.D.,
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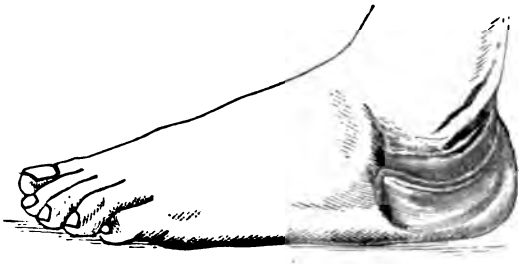
AS comparatively few cases of entire excision of the os calcis have been reported, and as the removal of this bone is still regarded by some eminent surgeons with but little favor, I think the following cases will prove of interest:

Case 1. John H., æt. 21 years, from New Kent Co., Va., was wounded in the left heel by a nail in October, 1867. He states that the nail was driven with great force into the bone, and that abscesses formed, which were permitted to open themselves. In May, 1868, he applied to me for treatment. Nearly the whole of the os calcis was found to be carious, the disease extending, as was afterwards ascertained, to the astragalus.

On May 23, 1868, I excised the os calcis and a small portion of the astragalus, adopting the method recommended by Mr. T. Holmes. An incision was begun at the inner border of the tendo Achillis and carried horizontally around the back and outer surface of the foot, upon a level with the upper edge of the os calcis, to a point midway between the heel and the base of the metatarsal bone of the little toe. The tendo Achillis was divided and the knife carried down to the bone until the incision was nearly completed, when, to save the peronei tendons, the skin and fascia only were cut through. A second incision, beginning near the anterior end of the first, a little in front of the external malleolus, passed vertically downwards, across the sole of the foot, and terminated near the inner border of the os calcis. Care was taken not to prolong this far enough to wound the posterior tibial vessels. The flaps thus made were thrown back, the peronei tendons held aside, and the joints between the os calcis, cuboid, and astragalus laid open. The bone was then dislodged by means of the lion-forceps, and carefully dissected from the soft parts covering its inner surface, the knife being kept close to the bone to avoid injuring the vessels. In Mr. Holmes' operation the tendons of the peronei muscles were divided. While this is probably not a matter of much consequence, it seems to me unnecessary. A small strip of lint was introduced into the cavity and brought out through the horizontal incision. The vertical wound was closed by means of wire sutures, and the parts supported with strips of adhesive plaster. The loss of blood was slight, no ligature being required. No splint was used in the after-treatment. The foot was laid upon a pillow covered with oil-silk, and for a few hours kept bathed with cold water. The vertical incision united by the first intention. The cavity filled up slowly, and was injected daily with a weak solution of carbolic acid. On August 1, he walked out on his crutches; on the 25th, he could bear some weight upon the limb, the wound being entirely closed; January 14, 1869, walked without assistance, limping slightly. In August, 1869, he paid me a visit, walking some miles to see me. The lameness is very trifling; can flex and extend the foot easily. He says "his left foot is as good as the other."

Case 2. Novell H., a rather delicate subject, æt. 17 years, came to see me in September, 1868, with caries of left os calcis, the result of a blow from a cricket-ball, received eight months previously. Abscesses formed and were opened, but continued to discharge. September 26, os calcis excised by method described in first case. The bone was so far destroyed by caries that it was difficult to recognize by its shape. No ligatures were required. The flaps were brought together and the same treatment pursued as in the first case. No splints used. That night slight hemorrhage occurred. The dressings were removed and the cavity injected with ice-water: this arrested the bleeding. October 2, erysipelas set in violently. The foot became red and swollen, and the constitutional disturbance very great. Sloughing of the integuments near the horizontal incision took place. The wound was now kept continually wet with cloths dipped in equal parts of whiskey and water; and tinct. ferri chlor. and Fowler's solution of arsenic were given internally. As it was difficult to empty the cavity of the illaudable pus which formed there, I made a counter-opening on the inside of the foot. The inflammation subsided in a few days, and the cavity began slowly to fill up. November 5, walked out on his crutches. December 10, wound closed. March 1, 1869, walked without assistance. At this time, July, 1870, he can flex and extend the foot readily, and walks with very little lameness. He says, "I limp a little, but not enough to attract attention; I can run or hop upon my foot without the slightest discomfort." The picture (from a photograph) will show the amount of flattening of the heel and the appearance of the foot. The irregular appearance of the cicatrix is accounted for by the integumental sloughing referred to.



Case 3. George C., æt. 23 years, wounded at Spottsylvania C. H., May 12, 1864, by a shell, which carried away the left foot above the ankle and crushed the heel of the right foot. That evening Dr. Straith, Chief Surgeon of the Artillery of the Second Corps, amputated the left leg in the lower third. Although the wound in the soft parts of the right heel was not serious, the os calcis was so extensively comminuted that its removal was necessary. A vertical incision was made, beginning on the inner side of the tendo Achillis, carried down to the point of the heel, and then forward along the middle of the sole of the foot to a point opposite the calcaneo-cuboid articulation. The flaps were turned aside, the tendo Achillis cut loose, and the pieces of bone picked out, until the whole of the calcaneum was removed. The after-treatment was of the simplest kind, and the man's recovery rapid. No splints used; cold-water dressing, and the cavity injected with some simple detergent lotion. September 1, walked about on crutches, bearing his weight on the foot. The wound healed entirely by October 10. I saw the gentleman upon the street a few days ago, and pointed him out to a professional friend (himself a close observer), and told him the man wore an artificial leg. He expressed some surprise at the information, as the man's gait upon the level pavement was so natural. I then informed him of the loss the man had sustained in the opposite foot. This he could scarcely believe, so smooth and natural was the man's movement.

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The picture shows the amount of deformity in this case. The foot is turned up upon its outer edge, to show the cicatrix.

In all of these cases the tendo Achillis formed a new insertion, and acted in raising the heel. Probably it became attached to the dense callous fibrous or osseous tissue which filled up the cavity left after the removal of the bone.

In connection with this subject I will state that my attention has been attracted several times to the very slight lameness following complete destruction of the tendo Achillis. I have been surprised at these results, because the teachings of Moreau and others led me to believe that great and permanent lameness inevitably followed destruction of this tendon. Moreau even goes so far as to state that "it is better to amputate the foot if the tendo Achillis is to be destroyed." I have lost the notes of several cases of this kind which I observed during the war, but I will mention the two following, as my recollection of them is very distinct.

The first was a Confederate major-general, shot at McDowell, May 8, 1862. The ball entered the outside of the leg, fractured the fibula about its lower third, and passed out upon the opposite side of the limb. I enlarged the wound of entrance and removed several detached fragments of bone. Phlegmonous erysipelas attacked his leg soon after the injury, and resulted in extensive sloughing. The tendo Achillis died, was separated by the process of the disease, and was removed with the forceps. This gentleman recovered after a tedious illness, and although he has a slight limp it is so trifling that it is difficult to tell from his gait the wounded from the sound leg.

The second case was that of a soldier wounded at Winchester by a fragment of shell. The missile tore out between three and four inches of the tendo Achillis, with the soft parts covering it. After some months the man walked with a very slight limp.

Whether, after such a loss as I have described in the two foregoing cases, nature supplies some adventitious tissue which takes the place of the tendon; or distributes the force of the contraction of the soleus and gastrocnemius upon the tendons of the peroneal and tibial muscles; or gives to the last-named muscles increased size and strength; or whether two or all of these circumstances are combined to enable the patient to raise the heel in walking, I do not pretend to say.

NOTE ON THE CONSTANT CURRENT IN CHRONIC METRITIS.

BY ROBERTS BARTHOLOW, M.D.,
of Cincinnati.

MEYER, in his treatise on Medical Electricity, makes it a reproach to gynecologists that they have paid so little attention to the applications of electricity in their special fields of practice. It is only necessary to look over any of the works devoted to the diseases of females, or to medical electricity, to learn how exceedingly meagre the information is on this subject. Duchenne,* Remak,† Benedikt,‡ and Morgan§ do not allude to the application of electricity in gynecology. Meyer has the following observations:

"Finally, the electric current has been used, especially by the French physicians Beauvain, Fano, Tripier, Beau, and others, for the removal of chronic swellings of the uterus, and its subsequent descent and dislocation,—observations worthy to be investigated, in consideration of the evils so frequently following the use of the sound and other means usually employed against flexions."‖

That the condition of the uterus known as *chronic metritis*, whatever views may be entertained as to its real nature, is most difficult to cure, is now generally admitted. The means of treatment now employed,—sponge or laminaria tents, applications of iodine, chromic acid, etc., extra- and intra-uterine cauterizations, incisions, etc.,—although more or less successful if persevered in, are not free from danger, and certainly involve an amount of troublesome manipulation not willingly submitted to by many patients, and not easily practised, except by experts who devote themselves to gynecological practice. Gynecologists themselves are by no means agreed as to the relative utility and safety of the means now used, and ingenuity is exhausted to invent apparatus which shall render the before-mentioned expedients safe, and to suggest treatment which shall be more successful. It must be considered desirable, then, to arrive at a means of treatment which will be at the same time effective and easy of application. Some experiences I have had with the constant current incline me to believe that we have in this a remedy to accomplish these important objects. Before narrating some of the cases on which I base this conclusion, it may be desirable to state the mode in which the constant current acts, and also give some account of the "Technik" of the operation.

The constant current has the power to induce contraction of the organic muscular fibre. This has been shown to take place in the arterioles when the superior cervical ganglion of the sympathetic is included in the circuit, as Hammond has demonstrated by ophthalmoscopic examination of the vessels of the retina. When the uterus is included in the circuit, slow contractions of the organ take place, with more or less distinctness, according to the degree of development of its muscular fibre, and these contractions are felt for some hours after the application. I need not stop to dilate on the therapeutic utility of such an action as this in an organ subject to chronic enlargement. According to some pathologists, the enlargement of the uterus is due chiefly to hyperplasia of the organic muscle; according to Virchow and his followers, to hyperplasia of the connective tissue. It is probable that the latter, together with increased blood-supply, constitutes the condition known as chronic metritis. If this view be correct, it is not difficult to conceive how firm contraction of the organic muscular fibre will promote absorption of surplus material and diminish the blood-supply.

Besides this action of the constant current, we must not lose sight of the effects first described by Remak as "catalytic,"—the chemical and resolvent effects. When the electric current is passed through a part, it tends to disturb the molecular arrangements in accordance with the laws of electrolysis. The brilliant results obtained

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* De l'Electrisation Localisée. Deux. Ed. Baillière, Paris, 1861.
† Galvanothérapie, par le Doct. Remak. Trad. par Morpain. Baillière, Paris, 1860.
‡ Elektrotherapie von Dr. Moritz Benedikt. Wien, 1868.
§ Electro-Physiology and Therapeutics. New York, Wm. Wood & Co., 1868.
‖ Medical Electricity, Hammond's Translation, p. 459.

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in this way by Remak during his life were discredited, and it was not until near the close of his career and after his death that the correctness of his views began to be acknowledged. These catalytic effects are now so generally admitted that it is unnecessary to waste space by a statement of the facts in support of them. They can be no more denied as occurring in the uterus than in any other organ which may be thus electrized.

As the constant-current battery is not sufficiently portable to be easily transported, the application of the current will be convenient only in office practice. Besides the battery with its appliances, an extension chair and a glass speculum are required. The positive pole is introduced through the speculum and placed in contact with the *os uteri*, and the negative pole is applied to the hypogastrium. If metallic rheophores are used, from ten to fifteen of Smee's elements are sufficient. I use, preferably, sponge-covered rheophores and sixty elements of Smee (Kidder's apparatus). The *séances* are from five to ten minutes in duration, and are repeated two or three times a week. As but little uneasiness is experienced at the time of the application, and as the contractile pains which come on afterward are by no means severe, women do not object to this mode of treatment, especially those who have been subjected to the manipulations practised by gynecologists.

Case 1. Mrs. G., æt. 40, mother of three children. Soon after birth of last child, four years ago, began to suffer with severe hypogastric and iliac pains, a sense of internal burning, obstinate constipation, and irritable bladder. She declined much in health, lost flesh, and became almost bedridden. The late Dr. J. F. Potter, of this city, who was called upon to treat her when she was reduced to this condition, diagnosticated *retroversion*, and introduced a Hodge's pessary. This gave so much pain it had to be abandoned. She went to Europe, visited the baths, and was treated by various gynecologists, among others by Scanzoni. On her return home she was in the hands of various physicians of New York and Cincinnati, with little benefit. When she came under my care I practised the usual methods: gave tonics, ergot, and arsenic; applied iodine to cervix and chromic acid to cervical canal; directed the hot vaginal douche, etc., with as little success as my predecessors in the treatment of the case. I then determined to employ the constant current, in the manner already indicated. Her condition at this time was as follows: Uterus retroverted to the second degree; corporeal and cervical metritis, cervical endometritis; body exceedingly tender; length of canal, 3¼ inches; menstruation profuse, lasting five or six days, and occurring every three weeks; severe bearing-down pains and deep-seated burning; constipation and great gaseous accumulation and frequent eructations.

When the poles of the battery were applied, she experienced uterine pains, which, although quite endurable, she likened to pains of first stage of labor. These lasted for some hours afterward at first, but gradually decreased in severity and duration. Decided improvement took place, first shown in the increasing facility with which the uterus could be restored to its true position by the sound, and by its slow instead of the former rapid return to its abnormal position; by the cessation of the burning and the intestinal disturbance, and by the freedom of walking-exercise from the unpleasant "bearing-down pains." After three months of the treatment by the constant current, the length of the canal is reduced to 2¾ inches, and the uterus is nearly, if not absolutely, in its true position.

Case 2. Mrs. W., æt. 32, and mother of one child eight years old. Has a rheumatic diathesis, and has suffered from two severe attacks of acute rheumatism. Has had uterine trouble five years, has been cauterized for ulceration, and has had iodine applied to cervix, and iodo-tannin by tampon.

Her general health is at present good. She suffers a great deal from "bearing-down pains," irregular but severe pelvic pains, referred chiefly to right side, irritable bladder, and constipation. Uterus retroverted to first degree. Os low down on perineum. No ulceration of cervix; slight endo-cervicitis. Body of uterus much enlarged and tender, and deflected to right side and posteriorly. Length of cavity, 3¼ inches.

After two months of treatment with constant current, uterus is restored to normal position; length of the cavity reduced to 2½ inches; pelvic pains have disappeared; and can take long walks without experiencing sense of "bearing-down."

Case 3. Miss W., æt. 30, a pale, small woman, of very marked nervous temperament. Has had uterine trouble, accompanied by distressing nervous symptoms. This case, as Case 1, was correctly diagnosticated by the late Dr. Potter, of this city, as one of *retroflexion*. After Dr. Potter's death, she was treated by a movement-cure physician, but received no benefit. This treatment consisted in part of electric baths. When she came into my hands, she was excessively nervous, but was in tolerable health. Menstruation regular, but scanty and excessively painful. Cervix and os normal. Uterine probe introduced with great difficulty, in consequence of the extremely acute angle at the seat of flexion. Body of uterus extremely sensitive to pressure.

She is still under treatment, but much improved after one month of localized electrization. Uterus is returning to its normal position. The uterine probe can now be easily introduced, and the body of the organ is much higher up in the concavity of the pelvis. With this change in the position of the womb there has occurred a corresponding improvement in the state of the nervous system.

I might bring forward other cases, but these will suffice to exhibit the great utility and advantage of this method of treatment. I recommend it to the consideration of my professional brethren.

A WELL-MERITED TESTIMONIAL.—In May last, Dr. John Conrad, for nearly forty years apothecary to the Pennsylvania Hospital, resigned his post. It was determined by those who had been, as attending or resident physicians and surgeons to the institution, associated with him, to express, by a suitable testimonial, their sense of his valuable services, and their esteem for him as a friend and fellow-worker.

A purse of seventeen hundred dollars was made up by these gentlemen, and handed to Dr. Conrad, with the request that he would make whatever use of it might be most agreeable to him. We understand that he is contemplating a visit to Europe.

Dr. Conrad has not only fulfilled the duties of his post most faithfully and efficiently, but his tact and geniality have endeared him to all who have been connected with the hospital. His careful and accurate meteorological records are of great value, from the long period over which they extend; while his success as a cultivator of flowers will be remembered with pleasure by many of those who, as students, have enjoyed the beauty of the grounds of the institution he has served so well. It is seldom indeed that such a tribute is so cordially rendered, or so thoroughly deserved.

WE learn with pleasure of the approaching appearance of a *Treatise on Military Surgery*, by George A. Otis, M.D., Assistant Surgeon and Brevet Lieutenant-Colonel, U.S.A. The work is nearly completed, and will soon be published as a handsome octavo of 900 pages, well illustrated by wood-cuts. It will contain a discussion of the principles and practice of military surgery, a digest of the results of injuries and operations in modern wars, and a review of the conclusions derived by the talented author from the study of the surgical annals of the late war, and from an experience of three years of service in the field. Dr. Otis is already so widely and favorably known by his reports on military surgery, that we shall look forward to the publication of his promised work with high expectations.

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THE MEDICAL TIMES.
A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

PUBLISHED ON THE 1ST AND 15TH OF EACH MONTH BY
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SATURDAY, OCTOBER 1, 1870.

SALUTATORY.

IN entering upon the publication of the MEDICAL TIMES, we are but realizing a plan which has long been entertained by the medical profession in Philadelphia, and supplying, we trust, a want which has been long felt here, and perhaps in other places. Much has been said of late—and with great force and truth—against the tendency to the needless multiplication of medical journals in America. It is indeed true that their large number and the varied character of their contents render it a heavy tax upon the active practitioner to read with care even the communications which bear upon the branch of medical science in which he is particularly interested. It may also be true that their excessive number has a tendency to favor the publication of hasty observations and immature conclusions, and to oppose the deliberate and well-considered preparation of elaborate treatises and exhaustive monographs. But the present day is, however, one of progress in medical science,—of progress so rapid as to be unprecedented in its annals. And one of the most essential requisites for the continuance and reality of this advance is that of numerous channels for the free and rapid communication between medical workers in every place. To enable medical science to be cultivated with the utmost success; to avoid waste of time and labor in endless repetition of experiment; to prevent tasks already accomplished from being again undertaken; to furnish every worker with the most recent observations and discoveries—such are some of the imperative wants which can alone be met by the publication of numerous journals at the shortest possible interval. The entire medical world is animated by a common desire and enthusiasm; the aims of all are identical, and in every medical community the same questions of vital importance are being studied and investigated. Even the shortest delay in the communication and diffusion of every new fact acquired is, therefore, a positive loss. The hoarding-up and retention of new and important observations is a wrong to the medical world; the latest discovery of a few days ago should already be the common property of all, and the recognized starting-point for all further study of the subject involved. This liberal, free, and prompt interchange of thought and observation between individual workers is, indeed, the very essence of the intense vitality and rapid progress of medical science at present. Every large medical community, therefore, including numerous workers, both in scientific and practical medicine, absolutely needs a suitable organ for the expression and diffusion of the results there attained. The precious opportunities for observation and study afforded by the sad wards of metropolitan hospitals are embraced with devotion and untiring zeal by the most able and experienced physicians and surgeons, who, while giving freely their time and skill, reap a priceless reward of knowledge as the result of their labors. It is not even sufficient that such results should be presented at the meetings of the many large and active societies which now abound in every medical centre. The transactions of these bodies include many of the most important and valuable additions to medical knowledge, and they too need channels for the prompt publication and wide distribution of their proceedings. Such channels can alone be afforded by medical journals appearing at short intervals.

There is still another and a most important function of medical journals, to which attention may be attracted, the more so as it has unfortunately been much neglected in this country. The medical profession in America constitutes an enormous body, with varied, numerous, and important interests; with responsibilities and duties of grave weight; and with prerogatives and rights which fairly merit recognition and protection. It is all-important that these interests should be zealously guarded; these responsibilities and duties openly recognized under all circumstances; these rights fearlessly defended, and the protection they merit urgently claimed whenever they are invaded or assailed. It is only through the agency of journals of recognized and representative weight that the profession can be influenced upon such subjects and roused to adopt a concerted position and plan of action. Again, the activity which is now manifested in scientific and practical medicine scarcely exceeds that which is directed to the consideration and discussion of questions of general interest, but bearing forcibly upon the medical profession. The gigantic scale of American life gives a vast importance to all questions of hygiene,—as of ventilation, of hospital construction, of sewerage, of the supply of water and food and the impurities and adulteration of these prime necessities, of the value of vaccination, as well as to all questions of medical jurisprudence, of medical education, and of the relations of the professional man to the citizen and to the state. The fullest and most comprehensive discussion of all such questions is required, and in such discussions a large part must necessarily be borne by medical men, while concerning some of them it is of vital importance to the medical profession at large that the most sound and wise views should be widely disseminated. It is in regard to this—the highest function of a medical journal, as being the means of influencing the professional and public mind on questions of the highest and most general interest—that American medical journals have more than once been accused of failing to fulfil their mission. There can perhaps be special reasons urged in explanation of this defect, but, in order that the accusation

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may no longer be applicable, it needs only that the attention and efforts of those be enlisted who have devoted special consideration and study to such topics, and who therefore will be capable of treating them fully and in a practical spirit.

It is, then, with no uncertain aim that THE MEDICAL TIMES enters the field of medical journalism. The cordial encouragement and cheerful support it has met from the profession in Philadelphia assure us of its position as their representative organ, while the reception the proposal has met with from physicians in other parts leads us to hope strongly for their support also. We have said that the medical profession here has long felt the want of such a journal; and it has been with good reason. The number of physicians in this city is unusually great, and includes many zealous workers, not only in practical medicine and surgery, but in experimental medical science. The hospitals of the city are numerous and large, and are served by a medical corps eminently qualified by education, capacity, and zeal. The medical societies have rapidly multiplied in size and number, and manifest great and increasing activity in the cultivation of medical science and art in all its branches. The position of Philadelphia as the oldest seat and one of the chief centres of medical teaching on this continent, and the great weight which must attach to the action and position of the profession here in regard to the important questions of the day, also render it highly desirable that they should be represented by a journal which may worthily take its place in the ranks of medical publications.

Actuated by this feeling, a meeting of over one hundred physicians, including the most eminent and active members of the profession in this city, was held in April last, and the publication of THE MEDICAL TIMES was then unanimously determined upon. The most ample assurance as to the value and variety of the original contributions that its columns will contain is afforded by the list of these names, as well as of those distinguished authors in other cities who have freely promised their aid.* The Editorial Department has been intrusted to a single editor, who will be ably assisted in his labors by a numerous corps of experienced associate editors. Its publication has been undertaken by the well-known house of Messrs. J. B. Lippincott & Co., whose reputation, liberal enterprise, and large capital insure the permanency of its issue in the most handsome and attractive style.

THE MEDICAL TIMES, therefore, appears as the result of no mere private enterprise, nor as the organ of any school or party, but as a journal which may fairly claim to represent the medical profession and medical interests in Philadelphia.

This is, however, far from being its sole object. The position to which it aspires is one free alike from local interests and from partisan spirit. The only aims which shall be recognized in its management are the advancement of medical and surgical science, the detection and reform of abuses, and the promotion of the interests of the profession at large. Animated by such aims, we ask for it a welcome, not only from the physicians of this city, but from those of the entire country.

* See Prospectus, p. v.

CORRESPONDENCE.

LETTER FROM VIENNA.

August, 1870.

"WHAT courses of lectures are you going to take?" is the question which first greets every stranger who visits Vienna with the intention of pursuing his medical studies at this university. That the question is a difficult one to answer is proved by the puzzled expression on the faces of the groups of students, evidently fellow-countrymen, who may be seen at all hours standing under the arched entrance to the General Hospital, studying the official announcement of the numerous courses of lectures to be delivered during the Semester. Indeed, even to one who has already spent some time in Germany and is somewhat familiar with the routine of a foreign university life, it is a matter of no little difficulty to arrange a daily schedule so as to embrace the desired courses of lectures. Every hour in the day can be advantageously occupied within the walls of the hospital; and it is in this *centralization* of instruction that we all recognized one of the great advantages of Vienna over Paris or even Berlin.

As no didactic lectures are given, every effort has been made to perfect the system of bedside instruction, and in the clinical wards of Professors Oppolzer and Skoda this method can be admirably studied. Each professor has under his control two large wards, filled with only such cases as present clinical interest. The immediate control devolves upon two assistant physicians, who hold the appointment for seven years, have comfortable rooms and board in the hospital, and receive a small salary, with the privilege of delivering private courses in the wards. To each patient two students, who have completed their fourth year of study, are assigned, whose duty it is to furnish a minute clinical history of the case, with the results of the physical examination and diagnosis, which is thoroughly criticised by the professor at the morning visit, and followed by a bedside lecture which often lasts two hours. The subsequent history of the case is recorded by the students, and is frequently examined by the professor; and woe be to those who are found wanting, for they are handled without gloves. Nothing could exceed the advantages of such a system with small classes; the student is brought into personal contact with the professor, the habit of close observation and accurate interpretation of phenomena is formed, and facility in the examination of patients and familiarity with the exhibition of remedies must ensue. In Vienna, however, 258 students are registered at Professor Oppolzer's clinic, exclusive of the large number of foreigners. It is with difficulty that thirty students can group themselves around the bed near enough to see the patient whose case is being clinically considered; others stand at a distance or endeavor to secure a good position for the case which is next to be examined; while a large number scattered around the wards, sitting on the beds of the unfortunate patients, almost drown the voice of the professor by chatting over the last exciting

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topic of their student-life. I am always reminded of one of John Leech's inimitable pictures, where two "street Arabs" are represented as peeking under the tent of a circus, one of whom, with a face of delight, calls out, "Oh, only come here—you get an elegant view of the *hoofs* of the horses!" So, too, at the clinic, after pushing and elbowing your way for half an hour you *may* get a good view of—the bedpost. Professor Oppolzer has recently received the well-earned honorary title of "Hofrath." It is unfortunate for his reputation that his aversion to publication has been so great that he has suffered much of the work done in his wards at his suggestion and under his immediate supervision to appear in the names of his former assistants, many of whom now fill important chairs in the smaller universities. His son-in-law, Ritter von Stofella, has undertaken the publication of his clinical lectures, in parts published at irregular intervals, the first three numbers of which have already appeared; and nothing can exceed the clearness and exactness with which the diseases of the heart and lungs are treated. Skoda's clinic is the most popular with the Germans: he lectures as he writes,—in syllogisms; the dry facts are presented, relieved by no comments, but step by step you are logically led to an inevitable conclusion.

"You will find," said a friend of mine to me, "that it is not from the men with whose names you are most familiar that you will learn the most." The name of Rokitansky will always be associated with the glory of the Vienna school, but it is from his books that one must become familiar with his views. His voice is so indistinct and low that even the German students who occupy the front row of the seats in his auditorium are unable to understand him; it is therefore useless for foreigners to attempt it. His conscientiousness is almost morbid; his lecture is constantly interrupted with warnings against some theory advanced in the first edition of his great work on Pathological Anatomy which he has since modified or abandoned. He still conducts the legal post-mortem examinations, and spends an occasional half-hour in the "Section-Saal," but the magnificent museum, which is almost entirely the work of his own hand, is his delight, and here he may constantly be seen, studying and rearranging the specimens, each one of which he has minutely described in Latin remarkable for its purity and elegance. Each specimen is so numbered that it is the work of only a moment to refer to a full clinical history of the case. He is now engaged in preparing a monograph on malformations of the heart, in examples of which the museum is very rich. Nothing can exceed the respect in which he is held by all those associated with him. "The professor," said his assistant to me, "can see changes in a specimen across the room which I can only demonstrate with my microscope." Since his election to the "Herrn-Haus," like Virchow, Rokitansky has devoted himself to the cause of liberality in all political questions, and it was in a great measure due to the eloquence of his maiden speech that the bill was passed which placed the control of the public schools beyond the power of the Catholic Church. In no department is the liberal spirit of the instruction given at this university more evident than in the lectures delivered by his late assistant, Dr. Scheitauer, who is now professor at Pesth. The views of Virchow, Recklinghausen, and Cohnheim were all fairly presented and compared with those advocated by the Vienna school. The material for illustration is inexhaustible, and every opportunity is given to become acquainted not only with pathological changes, but with the rarer forms of abnormal development of the various organs.

The low mortality in the Obstetrical Department, and the freedom from epidemics of puerperal fever, for some years past, can only be ascribed to the unwearying vigilance of Professor Braun. The wards are perfectly ventilated by a system presenting many points of resemblance to that employed in the Philadelphia Hospital. All the linen used is subjected to a high temperature, the lying-in ward is constantly changed, and all puerperal patients presenting any abnormal symptoms are at once isolated. This immunity is the more remarkable when the fact is remembered that these wards are devoted to clinical instruction and are visited at all hours by students coming from all parts of the hospital, any one of whom may be the bearer of contagion, if the proper precautions for disinfection are neglected. The value of this department as regards operative obstetrics is increased by the fact that difficult or apparently hopeless cases are sent here from all parts of the city. I saw, some time ago, a case of this nature, where repeated unsuccessful efforts to perform version in a pelvis which was somewhat contracted had been followed by a tetanic contraction of the uterus. On examination it was found that both arms and one foot had been brought down into the vagina, while the uterus clasped the body of the child so firmly that version was impossible. The condition of the woman was critical, and amputation of the neck of the infant, by means of Braun's blunt hook, was performed. The operation was a tedious one, on account of the difficulty in reaching the neck of the child. Pajot accomplishes the same result more easily by means of a simple instrument which carries a knotted twine around the body of the child, and by a rapid seesaw motion severs the part. The late Sir James Y. Simpson, in the last obstetrical lecture which he delivered, demonstrated to his class the ease and rapidity with which this can be effected. The galvano-caustic apparatus is now altogether used for amputation of the cervix uteri, an operation frequently performed in Vienna, and justified by Virchow's demonstration of the tendency which even simple papillary growths of this part show to become malignant. The ease with which the removal is effected and the freedom from hemorrhage recommend the instrument highly, but its great cost and the necessity of employing a large battery will restrict its use to public institutions. In the wards of Professors Sigmund and Hebra, syphilization has been thoroughly tried and abandoned, and mercurial inunction is now the regular treatment for constitutional syphilis.

A pamphlet recently published by some of the students, entitled "Medical Instruction at Vienna, and its Faults," has excited a great deal of interest and surprise. It seems that it is necessary for the students to wait one or two hours before the doors of Professor Hyrtl's lecture-room in order to secure a seat from which the demonstrations can be satisfactorily seen. 607 students are enrolled for the lectures on topographical anatomy, while seats are provided for 350 at most, in a room poorly lighted, and so devoid of all ventilation that a headache is the inevitable result of attendance on a lecture. I heard Hyrtl describe, with great earnestness, his yearly efforts to secure a proper hall, the promises of the government, and its failure to fulfil them. The "circumlocution office," unhappily, exists in Vienna as in London.

Professor Brücke is also unable to provide room for the numerous students who have been drawn to Vienna, actuated

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by a desire to work with this distinguished physiologist. He has devoted even his private room to students, while the larger part of those who work in this department have to employ the benches in the lecture-room as tables, and remove their complicated apparatus as the hour of lecture draws near. No wonder that even the genius of Brücke cannot retain these students, when the university at Leipzig, with its magnificent new laboratorium under the immediate control of Ludwig, offers such attractions. The pamphlet is earnest and respectful in tone, and cannot but be productive of good results. That it may be so is the sincere wish of all the foreign students who enjoy the advantages of the instruction given in this university, which, in spite of its defects, cannot but be recognized as the first school of medicine in Europe.

* * *

TRANSACTIONS OF SOCIETIES.

ACADEMY OF NATURAL SCIENCES.

A SEMI-MONTHLY meeting of the Biological and Microscopical Section of the Academy of Natural Sciences was held April 18, 1870, Dr. J. Gibbons Hunt in the chair.

After the reading of the minutes of the previous meeting, Dr. William F. Norris exhibited some specimens of gold and silver staining, prepared according to the methods of Cohnheim and Von Recklinghausen, including a very beautiful preparation of the tail of a tadpole, wherein the many-rayed cells of the connective tissue, the nerves and blood-vessels, with the nuclei in the walls of the capillaries, were all brought out with wonderful clearness and sharpness of outline by coloration with chloride of gold; also one of the frog's cornea, treated by the same reagent, and showing with remarkable distinctness the tinted fixed corneal corpuscles and the ultimate nerve-fibres. Dr. N. also exhibited some specimens of the centrum tendineum of a rabbit's diaphragm, which had been treated with a one-half per cent. solution of nitrate of silver, and showed very distinctly the endothelium of the lymph-vessels in that structure. In reply to various inquiries made by different members of the department respecting the practical minutiæ of these processes, Dr. Norris stated that he was at some loss to account for the want of success complained of by one or two members, and believed that, with proper precautions, little difficulty need be experienced. In the first place, one should always make use of perfectly fresh tissues; the post-mortem changes which occur in the course of a few hours after death often entirely vitiating the results; and, in the second, great care must be taken to avoid supersaturation and consequent too intense staining of the structures. In preparing, for example, a specimen of the frog's cornea, the reptile should be killed, the cornea removed at once by means of a cataract-knife, and plunged into a bath of half of one per cent. solution of chloride of gold (aurei chlorid. gr. ivss, aq. destil. f℥ij), in which, being of a moderately firm texture, it should remain immersed from ten to fifteen minutes. When thus sufficiently impregnated with the gold salt, the preparation should be transferred to distilled water slightly acidulated by the addition of two drops of No. 8 acetic acid to each ounce. In this fluid it is allowed to remain exposed to diffused light till the preparation has assumed a purple hue, after which the epithelium should be stripped off and the specimen mounted in glycerin for examination. Other tissues should be stained in a similar manner, immersing them in the coloring fluid for a longer or shorter time, according to their delicacy or absorbent power. In using nitrate of silver the solution should be from one-fourth to one-half per cent.; the tissue should be immersed for a short time, until, owing to the coagulating effect of the reagent on the albuminoid substances and the consequent reduction of the salt, a faint, grayish, silvery opalescence of the surface and slight loss of transparency are produced. The preparation should then be freed from excess of the silver salt by washing, transferred to slightly acidulated water, and placed in the light until the desired reduction, and consequent brown staining of the tissue, are produced.

After some further discussion of this interesting subject by members of the Section, Dr. J. Gibbons Hunt exhibited some mounted slides of the Saxifraga sarmentosa, and observed that, in regard to the stomata in plants, the general rule is that they are distributed all over the under surface of the leaves. We find exceptions to this law, however, in some species of Saxifraga; and in S. sarmentosa the stomata are grouped in clusters only, and are not found in the cells between the clusters. In other species of the genus the same peculiarity is found, but this arrangement of the stomata cannot be regarded as a generic feature, because some of the Saxifrages have these organs distributed all over the under surfaces of their leaves. Dr. Hunt further remarked that the singular amœboid movement so often noticed in the white blood corpuscle seems to be a phenomenon not confined to the animal kingdom. A movement apparently similar may be distinctly observed in the nucleus of the cell of Anacharis alsinastrum, and in the plant this wonderful movement appears to be more active than that seen in the blood.

After a short session devoted to the transaction of private business, the department adjourned.

Jos. G. RICHARDSON, *Recorder.*

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CASE OF UNUNITED FRACTURE OF TIBIA, UNDER CARE OF D. H. AGNEW, M.D.

Reported by Dr. C. T. Hunter, Senior Resident Physician.

PATRICK C., æt. 45, miner. Admitted into the Pennsylvania Hospital for an ununited fracture of his right tibia of fourteen weeks' standing. The fracture originally was compound, and resulted from a large mass of coal falling from a height on his leg. The tibia was fractured transversely at its middle; the fibula escaped injury. There was no displacement of the fragments, and the wound of the integuments, a lacerated one, produced by the cause of the fracture, was situated on the anterior surface of the leg, directly over the seat of fracture. At the time of the occurrence of this accident the patient's general condition was excellent; but, owing to some fault of nutrition, the fragments refused to unite, although the wound of the soft parts healed kindly and with very little delay.

On admission into the hospital it was discovered that there was decided mobility between the fragments. The muscles of the leg were atrophied, and the patient's health was below par, owing to his long confinement. Nine days later, Dr. Agnew, the visiting surgeon, determined to make an attempt to excite sufficient local irritation at the seat of fracture, by an operation, to cause union of the fragments. In order to accomplish this, the patient was thoroughly brought under the influence of ether, and a long gimlet was then passed through the integuments on the anterior surface of the leg and to the outer side of the spine of the tibia, obliquely upwards and backwards through the ends of the two fragments, thus holding them firmly and in accurate apposition with each other. This instrument was allowed to remain in for thirty days, the parts being kept at rest by a couple of closely-fitting pasteboard splints and a bandage.

On the 9th of May the gimlet was removed, and, on examining the leg carefully, firm union was found to have taken place between the fragments. While in, the gimlet gave rise to no sloughing or ulceration; indeed, there was so little irritation excited in the soft parts by its presence that it was found necessary to change the primary dressing but once during the active treatment.

The patient was now permitted to leave his bed, and encouraged to walk about the wards and hospital-yard with the aid of a pair of crutches, the leg being enveloped in a starched bandage. His constitutional treatment consisted of fifteen drops of the muriated tincture of iron and one grain of quinia three times daily, together with the best hospital diet.

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The patient was discharged from the hospital on the 27th of May, 1870, with a perfect leg.

CALCULUS IMPACTED IN THE URETHRA.

James B., æt. 28, laborer, was admitted into the hospital on the 6th of April, 1870, for retention of urine, caused by a calculus becoming impacted in the fossa navicularis, completely occluding the canal of the urethra. For three or four months before seeking for relief at the hospital he had been subject to great suffering and to repeated attacks of retention of urine by the slow passage of this stone along the urethra from the bladder. Owing to the large size of the calculus and the diminution in the calibre of the urethra just within the meatus externus, the patient had been unable to force the stone beyond the fossa, in which it became impacted, and from which his medical attendant had been unable, even with the aid of instruments, by which the meatus had been dilated, to extract it. Immediately after his admission he was thoroughly etherized, and the meatus externus enlarged by an incision upwards and backwards in the glans penis; the calculus was then seized by a pair of bullet-forceps, and, with very little stretching of the urethra, removed. The slight hemorrhage that followed was easily controlled by a compress of lint, oiled and inserted into the wound, where it was retained by a narrow roller. On the succeeding day the patient, having suffered so little from the effects of the operation, and being relieved so much by the removal of the obstruction to the passage of his urine, asked for his discharge, which was given him. About a week later he presented himself at the hospital and told me that the wound was almost healed, and that he had suffered scarcely any annoyance from it. The calculus measured half an inch in length and a quarter of an inch in breadth.

REVIEWS AND BOOK NOTICES.

THE CELL DOCTRINE: ITS HISTORY AND PRESENT STATE. By JAMES TYSON, M.D., Lecturer on Microscopy in the University of Pennsylvania, etc. 12mo. pp. 150. With illustrations. Philadelphia, Lindsay & Blakiston. 1870.

It is with pleasure that we welcome this little work to the great world of books, filling, as it does, an empty niche in our English literature. In it Dr. Tyson is a historian, rather than a maker of history; but if to bring order out of apparent chaos, form and shape out of apparent mist and uncertainty, is to do good work, then surely he has claims upon our gratitude. To the medical student—ay, to a large proportion of medical practitioners—the "cell doctrine," with its various modifications, often seems hopelessly confused. In the little work before us we have a succinct and very clear account of the steps through which the present doctrines have little by little been evolved, and an equally clear comparison between the views of the more advanced theorists. We commend it, then, most heartily to the medical student, as well as to the busy practitioner who has been unable to follow, through the various French, German, and English authorities, the conflict over this, the foundation theory of life. Every medical college in the land should have it upon the list of its text-books, and the most learned professors will find it valuable on account of its copious bibliography.

MEDICAL DIAGNOSIS, WITH SPECIAL REFERENCE TO PRACTICAL MEDICINE. By J. M. DA COSTA, M.D. Third Edition, revised. 8vo. pp. 844. Philadelphia, J. B. Lippincott & Co. 1870.

So rapid are the advances in our knowledge of disease, and so numerous are the additions to our facilities for its accurate diagnosis, that it would seem necessary that there should be rapidly repeated editions of any work on diagnosis or practical medicine which would keep pace with them. Dr. Da Costa has had ample opportunity to make appropriate emendations, since his work has passed through two large editions and reached a third in the six years of its existence. The many excellencies of the former editions are here repeated, while appropriate space is allotted to the introduction of new matter, without too much increasing the bulk of the volume. In the sixty additional pages is contained matter concerning the sphygmograph, the use of the ophthalmoscope in diseases of the nervous system, temporarily deranged special sense, some points of clinical interest with regard to palsy; also remarks on deranged nutrition and secretion as connected with the nervous system. The tabular element, so useful in all writing and teaching, is retained, and added to where called for. Thus, the valuable table of Prof. Haughton for the estimation of the daily excretion of urea from the specific gravity is introduced. In other respects also the subject of the urine and urinary diseases has been completed by the incorporation of the chemical and other aids it has received since the second edition was issued. Among the more important of these are the changes in the retina in renal disease as discovered by the ophthalmoscope. In skin diseases *chloasmata* are added to *maculæ*, making the only change in the classification of the second edition.

It is impossible, in our limited space, and indeed needless, to analyze further the contents of a volume already so familiar to the profession. It is sufficient to say that we believe it the best and safest authority which can be selected for the guidance of the student or young practitioner, and cordially commend it to them as such.

The publishers have well executed their part, having even improved the appearance of the book, already creditable to them.

A HAND-BOOK OF THERAPEUTICS. By SIDNEY RINGER, M.D. Wm. Wood & Co., New York. 1870.

THE PRESENT STATE OF THERAPEUTICS. By DR. J. RODGERS. Jno. Churchill & Sons, London. 1870.

Probably it would be a matter of some difficulty to find two books more directly antagonistic, both in spirit and method, than those whose titles head this notice. In the one, the author, with a rare faith in empirical medicine, heaps together the rich harvest of ancient and modern experience in wild, systemless profusion. In the other, marches a prince among doubters, systematically, relentlessly pushing forward the stern, hard logic of figures and fair deductions, never losing sight of his goal, until at last, in his own words, the sad conclusion is inevitably forced upon us that the materia medica of the old school, the result of the accumulated experience of ages, is a worthless—nay, more, as it has hitherto frequently been employed, a noxious—mass of what were once regarded as health-restoring drugs.

Dr. Ringer's work claims to be a hand-book for the use of students; and yet we conceive it to be the last book that a judicious teacher would place in the hands of his pupils, holding, as we do, the belief that system is of the utmost importance in imparting the first outlines of knowledge on any subject. The very absence of system, with the richness in unconnected empirical facts, however, renders the work the more valuable to the busy practitioner as a browsing-ground on which he can spend odd moments of leisure.

The argument of Dr. Rodgers' book is as follows: Homœopathic treatment of disease is simply no treatment at all. Acute disease, treated homœopathically, yields better results than when treated in the orthodox manner: therefore our orthodox treatment is a mortal error.

The first premise of this argument Dr. Rodgers, we think, establishes beyond all cavil. But in his attempt to do the same for the second, to us, he corroborates the old saying that "Credulity and incredulity are twin brothers, travelling hand in hand." Thus, he relies upon the statistics of certain Viennese homœopathic hospitals, which, according to his own showing, are founded upon inaccurate diagnoses, and in which fifteen out of sixteen cases of emphysema of the lungs are claimed to have been cured!! We deem the statistic method of inquiry as liable to elicit error as truth, unless used with very great caution, and, after a careful perusal of Dr. Rodgers' book, remain firm in the opinion that our present therapeutics will weather the storm which he has raised against it. Indeed, we fear most from such works as Dr. Rodgers' as tending to lead into the easy ways of empiricism rather than the laborious paths of physiological investigation and study,—the only ones which can lead at last to assured success and triumph.

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GLEANINGS FROM OUR EXCHANGES.

STATISTICS OF HYDROPHOBIA.—M. Bouley has presented to the Academy of Sciences a valuable report based upon the official cases of hydrophobia reported between the years 1863 and 1868.

It appears that the report includes 320 persons who have been bitten by mad animals,—*i.e.* 284 by male dogs, 26 by bitches, 5 by cats, 5 by wolves.

Of the 320 the bites were followed in 129 cases (40·31 per cent.) by symptoms of hydrophobia and by death. In 123 cases (38 per cent.) no such symptoms followed. In 68 cases the result was not reported; but probably most of them recovered, as the author thinks it more probable that a fatal result would have been noted.

Of the 320 persons bitten, 206 were males, 81 females. In 33 cases the sex is not mentioned. Of the 206 males, 100 (or 48 per cent.) died; while of 81 females but 29 (or 36 per cent.) died.

The age at which most cases occurred was from 5 to 15; but at this age the bites are more rarely followed by hydrophobia: thus, of 97 cases between 5 and 15 the mortality was but 26; while between 15 and 25, 25 cases occurred, with 12 deaths; between 25 and 35, 34 cases, with 21 deaths; and between 35 and 45, 28 cases, with 17 deaths.

Season had but little influence on the frequency of the cases: thus, during April, May, and June there were 89 cases; during June, July, and August, 74 cases; during September, October, and November, 64 cases; during December, January, and February, 75 cases. It is difficult to overestimate the importance of this result, which shows the necessity of guarding against hydrophobia equally at all seasons.

Of 109 cases when the *period of incubation* was determined, it was less than 60 days in 76; in the 33 others it varied from 60 to 240 days, though in but a comparatively few cases did it exceed 100 days. It would follow from this, therefore, that after a bite from a rabid animal the chances of hydrophobia following diminish rapidly after the end of the second month. The period of incubation is much shorter in young persons (3 to 20 years) than in those older (44 days in the first series, against 75 in the second).

All of the cases in which symptoms of hydrophobia followed were fatal: the duration of the disease being, in 74 out of 90 cases, less than four days; the majority of cases terminating on the second or third day.

The frequency with which the wound was followed by symptoms depended much on its locality: thus, of 32 cases where the face was bitten, 29 died; of 73 cases where the hand was bitten, 46 died; of 28 cases where the arm was bitten, but 8 died; of 24 cases where the leg was bitten, 7 died; and of 19 cases where the trunk was bitten, 12 died.

In regard to the treatment, it appears from the statistics that the application of the actual cautery to the wound as quickly as possible is the surest prophylactic measure: thus, of 134 bites which were cauterized, 92 were followed by no bad symptoms; while of 66 bites which were not cauterized, death followed in 56 cases. If cauterization (by actual cautery or by caustics) cannot be practised, such other prophylactic means as suction or expression of the wound, or the application of a ligature above the wound, should be employed. (*Arch. Gén. de Méd.*, June, 1870, p. 752.)

EXTIRPATION OF A KIDNEY IN MAN. By PROFESSOR G. SIMON, of Heidelberg.—In a communication to the *Deutsche Klinik* for April, 1870, Professor Simon gives an abstract of the highly interesting and unique case of nephrotomy which he performed in August, 1869, in which he corrects some inexact statements that have appeared in some of the continental journals. The patient, a woman, forty-six years of age, had been operated upon by Dr. Walther of Offenbach, one year and a half previously, on account of a cystoid tumor of the ovary which was so intimately connected with the uterus that that organ had to be removed at the same time, ovariotomy being thus combined with hysterotomy. The left ureter was also so closely adherent to the mass that its severance became a necessity, in consequence of which an abdominal-uretral fistula remained, through which all of the urine secreted by the left kidney involuntarily escaped. Fruitless attempts to cure this intolerable condition, by trying to effect a communication between the ureter and the bladder, were made by Professor Simon, and efforts to produce artificial occlusion of the ureter, and by that means occlusion of the kidney, had to be abandoned on account of very dangerous symptoms.

Extra-peritoneal nephrotomy was ultimately practised. The patient stood the operation pretty well, and after six weeks could leave her bed. At the expiration of six months the ligatures came away from the pedicle with comparatively slight traction, and two days afterwards the sinus in which they were imbedded had closed, and thus the whole wound had cicatrized.

At the present date, seven months after the operation, the woman is perfectly well, being engaged all day in needlework, and sometimes takes long walks in the environs of Heidelberg. In a pamphlet on the case, which will appear in a short time, Professor Simon promises to give its full history, together with a description of the different steps of the operation, and other interesting and important details. (*Edinburgh Medical Journal*, May, 1870.)

STATISTICS OF EXCISION OF THE HIP-JOINT FOR CARIES. By DR. H. LEISRINK, of Hamburg.—In this elaborate article, in which a score of cases from the practice of German surgeons make their appearance for the first time, Dr. Leisrink insists that excision of the hip-joint is a life-saving operation if it be performed early enough,—his indication for it being caries as soon as evinced by the formation of abscesses. His statistics of the operation are interesting, and they show a higher percentage of mortality than any that have heretofore been published. An examination of the 176 cases shows 56 recoveries, 98 deaths, and 22 under treatment at the time they were reported, thus affording a mortality rate of 63·6 per cent.

85 of the operations were performed by German surgeons, with a mortality of 68·8 per cent.; 42 by surgeons of Great Britain, with a mortality of 28·5 per cent.; 29 by American surgeons, with a mortality of 48·3 per cent.; 16 by French surgeons, with a mortality of 75 per cent.; and 4 by Russian surgeons, with a mortality of 50 per cent. (*Archiv für Klinische Chirurgie*, Band xii., Heft 1, 1870.)

BROMAL HYDRATE. By DR. E. STEINAUER.—The bromal hydrate is in all respects the analogue of chloral hydrate, breaking up in the presence of an alkali into bromoform and water and occurring in acicular, aromatic crystals, freely soluble in water. Its symbol is $\frac{CBr_3}{COH}+2H_2O$. When it is injected into an animal, it very slowly develops bromoform,—the author having been able to recognize both bromal and bromoform as existing in the blood one hour and a half after the injection. When injected into frogs in the quantity of from 0·002–0·01 grm., bromal produces at first great restlessness and activity; then, after some minutes, a sleep not so deep that the frog will remain on his back when laid there, but accompanied by an anæsthesia so complete that the legs can be cut off piecemeal and acid put on the wound without producing any recognition. Sometimes opisthotonos occurs; sometimes death takes place quietly, with gradually ceasing respiration.

The effects upon warm-blooded animals—cats, dogs, porpoises ? (*Meerschweinchen*)—were as follows: First, inquietude and contraction of the pupil, occurring immediately after the injection; then hyperæmia of the mucous membranes of the mouth and nose, with blinking of the eyelids, slipping of the limbs, and afterwards closure of the eyes, and sleep, out of which the animal would spring up now and again as though dreaming. Increased secretion from the mouth and nose followed, and finally anæsthesia, very frequent respiration, dyspnœa, and cyanosis. The sticking of a needle excited nowhere any indications of sensibility, although reflex actions were occasionally produced. The dyspnœa grew worse, and death occurred at last, either in convulsions or with gradual failure of the respiration and heart's action. After death, in a number of instances in warm-blooded animals, both auricles and ventricles were found relaxed and filled with fluid blood and dark-red coagula. The same condition of things also existed in frogs.

In other cases, both in warm- and cold-blooded animals, the

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left ventricle was found tetanically contracted and bloodless, whilst the right ventricle and the auricles were found relaxed and distended. In some instances the heart was exposed before death and the left ventricle seen to be tetanized, whilst the other cavities were still beating. Surprised at this, Dr. L. instituted experiments to discover, if possible, its cause, and satisfied himself that the different results depended upon the size of the dose: if the latter was large and caused death in a short time, the ventricle was found relaxed and gorged; if small and the fatal result long deferred, the ventricle was contracted and bloodless.

The first of these methods of death Dr. L. explains as the result of the liberation of active nascent bromoform in such quantities as to cause immediate cardiac paralysis. The second method is, he believes, produced by the products resulting from the oxidation of the bromoform, and the consequent liberation of nascent bromides or possibly bromine itself. There are, then, three stages of symptoms in bromal-hydrate poisoning: first, the excitement and unrest caused by the bromal hydrate acting as such; then the anæsthesia and hypnosis produced by bromoform; and, finally, dyspnœa and cardiac tetanus, caused by the bromides or bromine. Chloral hydrate differs in its action chiefly on account of the chlorides, the ultimate result of its decomposition in the blood, being innocuous. The proofs (?) of this theory are: First, in regard to chloral hydrate (to show its action when not decomposed in the blood), in a case of arthritic disease with deficiency of alkali in the blood the drug produced simply intense excitement, instead of its wonted effects; but when the patient was put upon the use of potash the usual hypnotic symptoms were induced. Second, experimental proof that if alkalies were administered to frogs a little before the hypodermic injection of the bromal hydrate, the stage of excitement was wanting, whilst the subsequent symptoms were intensified. Third, the finding of an increased amount of bromides in the urine of bromohydrated animals. Fourth, the finding of bromides in the blood,—by a method, however, which might produce them out of bromoform if alone present.

Bromal was also administered repeatedly to several patients,—most of them epileptics,—with the effect of producing sleep and very greatly diminishing the number of the paroxysms. The best results were obtained when alkalies were used also. Thus, Anna S., epileptic, having always one and often two paroxysms weekly, took for eight days 1·5 grm. bicarbonate of soda, and had in the mean time one convulsion, severe headache, restless nights. On the ninth day she took 0·2 grm. bromal hydrate in pill. Slept well the following night, and woke without headache. She took the same dose at evening for three weeks, and in the morning and at midday one-half teaspoonful of a powder containing "Natr. bicarb., Sacch. alb., ää 30·0 grm.; Elæosacch. menth. pip. 7·5." Twice she had prodromic feelings, but no epileptic paroxysms. The bromal hydrate was also given to several patients suffering from Tabes dorsalis, with the result of greatly relieving pain and producing excellent sleep at night. (*Virchow's Archives*, May 19, 1870.)

A Child Crying after Craniotomy.—In the annual address delivered before the Dublin Obstetrical Society, Dr. Ringland stated that the reason why the well-known Dr. John Kirby gave up the practice of midwifery for that of surgery was the following circumstance: He was once called in to assist a physician in a case of badly deformed pelvis, in which the woman was rapidly sinking, and lessening of the head was imperatively demanded. This operation was performed by the attending physician, who quickly delivered the child and laid it on the floor. While they were both urgently engaged with their patient, the wretched infant, although deprived of most of its brain, horrified all present by crying loudly out. Immediately the original attendant adopted the more than questionable course of crushing in the head of the child with the heel of his boot. A horrid whisper at once passed around the room among the lookers-on, and, whilst a coroner's jury exonerated the immediate actor, yet public opinion ran counter to him, and he completely lost his midwifery practice. Dr. Kirby was so distressed at this occurrence that he at once gave up that branch of his practice, which was then very large. (*Dublin Quarterly Journal*, February.)

The Selection of Monthly Nurses.—From the same interesting address we glean the following: Dr. Charles Johnson, from his first starting into practice, was most particular in the selection of his monthly nurses, and would not permit his patients to employ any he did not himself approve of. This was then a rather novel course to adopt, and was often stoutly resisted by the ladies, who considered they ought to have as full liberty in the choice of their monthly nurses as of any domestic servant. But Johnson steadily adhered to the rule he had laid down, and by so doing was able to keep a very wholesome and needful check over this class of medical subordinates. The accoucheurs of Dublin are much indebted to him for possessing the undisputed right of nominating the nurse, without which they would have no real control or authority over her or over the patient. (*Ibid.*)

MISCELLANY.

The War in Europe.—At present the Franco-Prussian contest interests the profession here in its political aspects only. Possibly its medical and surgical history will be at some future time added to the experience so largely increased during our own late war.

Americans studying medicine abroad can, if they speak German, obtain positions as assistant surgeons in the Prussian army; the French forces, on the contrary, are to be officered exclusively by Frenchmen. Such were the announcements made by these governments respectively. It will be remembered that during the Crimean War quite a number of our countrymen entered the service of the Czar, and some of them gained rank as well as influence in his medical staff.

We learn, from telegraphic reports in the daily papers, that an association somewhat similar to our own Sanitary Commission has been formed in Paris. It is chiefly under the auspices of American ladies,—Mrs. Burlingame being its president, and Mrs. T. W. Evans, the wife of the celebrated dentist, its vice-president.

M. Nélaton was said by some of the French papers to have gone to the front for the purpose of organizing an ambulance corps; but it is shrewdly suspected that the real object of his presence there was to give his professional services to the emperor.

The chief medical officer of the French army is Baron Larrey, a son of the distinguished man who filled the same position in the time of Napoleon I. At the head of the Prussian medical staff is Inspector-General Grimm.

"Dr." Paul Schoeppe, convicted of the murder of Miss Stennecke (perhaps justly, but certainly on insufficient evidence), asks the Governor to discharge him, "that he may go and fight that impudent man, Napoleon." From what is known of the "doctor's" record, he could probably meet almost any impudent man on equal ground in that respect.

The Smallpox in Paris.—The epidemic of variola in Paris seems to have subsided. During its continuance, if report says truly, Dr. Lanoix and his confrères who vaccinated directly from the heifer made very large sums of money. It does not seem, however, to be a settled fact that the protection afforded in this way is any more complete or certain than that derived from the lymph or scab taken from the human subject.

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THE naval board of medical examiners of candidates for admission and promotion in the medical staff of the navy resumed its sessions, after the summer recess, at the Naval Hospital, Philadelphia. It is said there are more than fifty vacancies in the list of assistant surgeons of the navy, and very few candidates seeking to fill them.

MORTALITY OF PHILADELPHIA.—The number of deaths in this city during June and July amounted to 3349, as against 3094 for the corresponding term last year. The return for the week ending July 23 was 584,—the largest ever made at our Health Office; the following week it was 581. It seems as if the long continuance of the heat might be assigned as one cause of this great mortality, since in some of the earlier weeks the relation between the two years was different. It may be of interest to our readers to compare them:

Week ending	1869	1870
June 5,	241	271
" 12,	250	278
" 19,	236	247
" 26,	261	310
July 3,	362	395
" 10,	382	340
" 17,	397	343
" 24,	466	584
" 31,	399	581

In contrast to these statistics of the general mortality of the city may be placed the report of the physician of the Municipal Hospital in regard to relapsing fever. In June there were 198 cases admitted, 139 discharged, and 28 deaths. In July the admissions were 91, the discharges 156, and the deaths 16.

ARTFUL.—One of the most quackish of the quack medical periodicals of the day recently presented to its readers, as a leading article, a full report of the last meeting of the State Medical Society of Pennsylvania. An uninitiated person might suppose the paper in question to be the official organ of that body. It is by such "dodges" as this that impertinent empirics edge themselves into recognition abroad as representatives of the regular profession in this country.

THE HEATED TERM.—During the month of June of the present year the temperature in Philadelphia averaged 77·21° Fahr.,—5·68° above the mean of that month for 45 years. For July we have recorded an average of 80·61°,—4·36° above that of the same month for 45 years. So far as the records can be relied upon, the whole period of June and July has never been so hot for 91 years; although the June of 1828, as well as that of 1831, averaged 77°, and the July of 1868 was even hotter, its mean having been 80·94°.

YELLOW FEVER.—In the early part of August several cases of yellow fever were brought to this port on board the brig Home, from Jamaica. They were detained with the vessel at the Lazaretto, where several new cases occurred among the officers and employés. Dr. Thomson, the Lazaretto physician, died of the disease, as did the steward and one or two bargemen. In all, there were 16 cases and 13 deaths. No cases occurred outside the inclosure.

A case of undoubted yellow fever proved fatal at the Pennsylvania Hospital on the 22d of August. The patient was a sailor on the ship Carleton, from Yarmouth, Nova Scotia; the disease manifested itself on the 18th, after his arrival in this city.

MANY females are volunteering to act as nurses for the wounded, both in France and in Prussia.

HEROIC MALPRACTICE.—The following piece of testimony, from a report of a coroner's inquest which took place recently in New York, speaks for itself:

"Dr. Marcus Berg testified that he resided at No. 117 East Seventh Street; was a graduate of Heidelberg; lost his diploma on the passage from Germany to this country; on June 24 was called to attend Mrs. F., and found her suffering from inflammation of the womb; she had also spotted fever; prescribed for her, and she soon grew better; five days before her death she was able to call on witness at his residence; on July 30 she was suffering from pain in the right side; found a malformation of the womb; on August 1, assisted by Althof, a barber, witness performed the operation; made an incision in the abdomen six inches in length; intended only to take out the fœtus, but, finding no ligaments or bandages to the womb, thought he would remove that also; the deceased would not have recovered had he not done so; no extensive hemorrhage followed the wound, which was afterwards sewed up; deceased did very well until the following day, when witness found the heart beating violently; death occurred at 6.30 P.M. on August 3."

We are happy to say that, on the strength of this ghastly confession of ignorance and recklessness, the jury attributed the death to "gross malpractice on the part of Marcus Berg," who was committed to the Tombs to await the action of the grand jury.

SURGICAL REPORTS OF THE LATE AMERICAN WAR.—It is gratifying to observe with what high appreciation the masterly reports from the Surgeon-General's Office are received abroad. In *Schmidt's Jahrbücher*, 1870, ii. p. 254, in a critique on "A Report on Excision of the Head of the Femur," the writer says:

"The Surgical Reports of the American War are among the most prominent and richest additions to military surgery. The colossal amount of the material on which they are founded, the admirable manner in which they are worked up, the methodical arrangement of the whole, and the thoroughly exhaustive use of the entire literature of the subjects, make these American works of untold value to the military surgeon."

Baron Larrey, in presenting, in the name of Surgeon-General Barnes, to the Imperial Academy of Medicine, Paris, the Collection of Photographs of Surgery and Morbid Anatomy published under direction of Lieutenant-Colonel Otis, dwells upon the great extent, variety, and value of the series, and closes in the following words:

"This precious collection is worthy the attention and thanks of the Academy, since it will be of great assistance to researches and works on surgery in general, and on military surgery in particular." (Extract from the *Bulletin of the Imperial Acad. of Med.*, vol. xxxv. p. 274, March 29, 1870.)

DEATHS OF DISTINGUISHED MEDICAL MEN.—Following close upon the deaths of Simpson and Syme, we hear of that of Von Graefe, whose name is so intimately associated with the history of recent advances in ophthalmic surgery. He had been in failing health, we believe from pulmonary phthisis, for several years.

We have also to note the death, in Paris, of M. Auzias-Turenne, who took an active part in the earlier experiments and discussions on the subject of syphilization.

PROF. TARDIEU, whose connection (as a witness) with the trial of Prince Napoleon made him so unpopular with the students, has at length been allowed by them to resume the uninterrupted discharge of his duties.

ATTENTION has lately been drawn, in several of the British journals, to the fact that sulphuric ether is used extensively by many of the people in the northern part of Ireland as a substitute for the ordinary intoxicating liquors.

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SATURDAY, OCTOBER 15, 1870.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE RADICAL CURE OF HERNIA.

BY D. HAYES AGNEW, M.D.,

Prof. of Clinical and Demonstrative Surgery, University of Pennsylvania.

IT is not surprising that an affection so exceedingly common and involving so much inconvenience and danger to life as hernia, should have invited profound study and suggested many ingenious plans for its cure. Few subjects falling within the range of surgical thought can claim a more extended literature. The practical question with us to-day is *its radical treatment.*

Cases of hernia will meet you very often in the round of professional work. You will find it, in some of its varieties, in both sexes and at all periods of life, from infancy to old age, congenital and acquired. The usual forms encountered in practice are oblique inguinal, direct inguinal, femoral, and umbilical. All of these may be ranked among the list of curable diseases, if undertaken during the very early years of life. Umbilical hernia is quite common in infant children. It is the result, most commonly, of imperfect support by means of the usual swathing band over that point in the abdominal parietes traversed by structures belonging to fœtal life, or of habitual crying, or not unfrequently of hooping-cough, or of the straining attendant on certain intestinal disorders. These facts should be carefully borne in mind, and particular care exercised to protect a portion of the body not sufficiently solid, for some time after birth, to resist any unusual pressure from within outward. Cases of this nature, when they occur, can be cured with great certainty. A piece of cork or deal-wood cut into a plano-convex form, covered with a piece of chamois leather, and stitched to the middle of a band of stout muslin, will answer well as a truss. In its application, the convex surface of the pad is placed over the umbilicus and the extremities of the bandage are pinned or laced behind the body. I have sometimes secured the pad to a strip of adhesive plaster two and a half inches wide and attached to the body. The objection to this plan is in the irritation which the plaster sometimes produces on the delicate skin of the infant. Trusses which are easy of application are also prepared by all surgical cutlers. There is a natural tendency in the umbilical ring to contract and solidify, and all that is necessary is to maintain the support until this end is accomplished, the work, usually, of only a few months.

Now, in regard to infantile inguinal hernia the same may be affirmed,—the child is perfectly curable by a little mechanical assistance. Parents will frequently come to you with their children, to ascertain how soon they might venture to apply a truss, having been advised by their medical attendant to wait until the child is older. Every day of delay is precious time lost, and only makes the case less manageable, by increased dilatation of the passages. You cannot apply the truss too early. Let it be adjusted the moment the defect is discovered. The instrument should have a firm, smooth pad, and, as there is always more difficulty in fitting a child than an adult, patience and care must be exercised, both by physician and mother, until the result is satisfactory. The tendency to excoriation must not be overlooked. To avoid this, the instrument must be removed once or twice in the twenty-four hours, and the parts rubbed with a little alcohol until in a glow, after which the truss must be replaced. The habit of removing the instrument during the night is to be reprobated: it must be worn night and day. Sometimes the testicle fails to descend, and the canal is kept patulous, waiting the pleasure of the tardy gland, in which case a portion of intestine either accompanies or slips past it, forming a hernia. What then?—shall a truss be applied, and thus tend to farther detain or injure, by pressure, the organ? We say yes: better cure the hernia, especially as in most cases of this nature the testicle is atrophied.

In such cases, therefore, as I have been describing, I do not advocate any operation; on the contrary, I believe all such attempts, except under very extraordinary circumstances, unwise, if not reprehensible. It is, however, to hernia in persons of more mature years that I wish particularly to invite your attention; and I undertake to say that in one variety, and that a very common one,—oblique inguinal hernia, and where the passages have not been too much dilated, as in certain old and large ones,—the surgeon is justifiable in recommending an operation with a fair prospect of cure. This assertion is not only founded on what has been accomplished by others, but on personal experience and observation. It may not be uninteresting to make a hasty review of the methods which have been practised at various times. Like many other affections, it has proved a splendid field for the fruitless devices of quackery, in one instance, at least, managed with such adroitness as to secure from government a munificent endowment and the personal distinction of knighthood.

The membrane which immediately invests a hernia is called its sac, and consists of a portion of the serous lining of the abdomen. Celsus was in the habit of cutting down, excising this sac, and even removing the testicles. So common had this operation become at one time, that it is stated, on the authority of Dionis, that one of these specialists fed his dogs with the glandular trophies of his art.

A second mode, described by Galen, consisted in passing a ligature round the cord and sac immediately below the external ring, tightening the same, and causing all below to slough out, or facilitating the process by excision. A modification of this plan is described by Ambrose Paré, in which a metallic thread was carried about the sac and cord at the external ring, and twisted sufficiently tightly to close the sac, but not to cut off entirely the supply of blood to the testicle. Langenbeck cut down in the sac at the external abdominal ring, separated it from the cord, and ligated the former alone.

Again, the sac was laid open, and drawn together by a running stitch,—the *sutura regia*,—with a view to obliterate the hernial track.

The introduction of plugs of skin into the ring or canal constituted another method. This has been repeated in various ways. That adopted by Dzondi, its originator, was to lift a flap of integument contiguous to the external ring, and, opening the latter, insert the former, closing over it the wound. The late Dr. Jameison, of Baltimore, treated a case of femoral hernia in this way, with, however, only partial success. Gerdy extended the idea of Dzondi by invaginating, on his finger, the skin of the scrotum, with its subcutaneous connections, into the canal, the cuticle being removed by liquor ammoniæ, thus exciting inflammation and favoring adhesion. A compress was next applied over the parts and firm pressure maintained, in order to secure consolidation of the superincumbent layers. This plan was slightly modified by Signorini, who passed hare-lip pins across the canal,—thus impaling the plug,—and throwing around each pin figure-of-8 turns of thread. Wutzer maintained the invaginated plug with a cylinder of wood, in the centre of which was a canal for the passage of a needle. This needle,

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when the instrument was pressed well up to the internal ring, was thrust forward and made to appear on the surface of the abdomen. A second piece of wood, having a hole at either end, was then laid over the skin in the course of the canal, the needle going through the opening at the upper extremity and a rod rising from the cylinder, with a thread on it, through the hole at the lower extremity. A screw was then run down on the rod, firmly compressing all the anterior layers of the canal together. Armsby, of Albany, substituted thread for the cylinder of Wutzer; Huchenberg, of Ohio, an ivory ball with a thread passed through it. Bonnet passed a pin across the sac close to the lower ring, and then, sliding pieces of cork along the needle from either end, compressed all the intermediate parts together. To secure these, the ends of the pin were bent down. Mayer, much in the same way, passed a double ligature and tied the ends over a piece of bougie.

Again, substances have been introduced into the sac in order to excite adhesive inflammation, as goldbeater's skin and cylinders of jelly by Belmas, the injection of Lugol's solution by Bowman, of Kentucky, and tincture of iodine by Professor Pancoast.

Wood, of Cincinnati, after returning the hernia, invaginates the skin of the scrotum with the finger, and, by means of a peculiar needle, pointed at either end and with an eye in the middle, passes a thread through the columns and ties it over a compress, approximating the sides of the ring so as to secure their union. A very ingenious operation has been devised by Mr. Wood, Demonstrator of Anatomy at King's College, London, and the author of a valuable treatise on rupture. It consists in dividing the skin of the scrotum and invaginating the subcutaneous tissue on the finger, raising, at the same time, the conjoined tendon. A needle is slid along the finger and made to penetrate the conjoined tendon and brought forward through the internal column of the external ring and also the skin. As soon as the eye appears, it is armed with a stout thread and the needle withdrawn, leaving the thread in the wound. The directing finger is now turned beneath the lower column of the external ring close to Poupart's ligament and well up opposite the internal abdominal opening. The needle is then conducted along the finger and made to transfix these structures and appear on the surface. A loop of the thread is left on the outside, and the needle drawn back, bearing the free end. Another passage is made through the triangular aponeurosis at the lower part of the rectus muscle, and the needle brought out on the surface and disengaged from the thread. It should be remarked that the final appearance of the needle on the surface is to be through the first puncture. A ligature so disposed embraces the conjoined tendon and the internal pillar of the external ring; the loop includes the external column, and the lower end of the triangular aponeurosis. A compress is placed over the canal, a thread secured across the same, and a Spica bandage applied. In his later operations, the metallic thread was used, and was deemed preferable to the silk or hempen one. Other operations have been proposed and executed, but in no material particulars differing from some of the methods already given in outline.

The present patient, aged thirty years, a sailor by occupation, has an oblique inguinal hernia on the left side. It descends into the scrotum, but is never large, nor are the passages very much dilated. He is free from cough, and, in my judgment, offers us an excellent case for a radical cure. I propose to adopt a plan which in seven cases I know to have proved successful. What I mean by success are cases in which after one year no return of the disease takes place, the patient during that time being engaged in his usual occupation. It is now six years since my first operation: that patient, so far as I know, unless something recent has occurred, continues well. Two cases cured—one a year and the other two years since—continue sound. In two other cases, performed by my friend Dr. Packard,—one now over three years and the other over two years,—no return of the hernia has taken place. Dr. Koerper, surgeon to the German Hospital, has furnished the notes of a case treated by him successfully, though time has not sufficiently elapsed to justify me in presenting this case as a success. Dr. A. G. Reed sends me the history of a case treated by this method which continues well, now one year and a half since the operation. The operation, if carefully executed, is attended with very little danger. In the case of a West India man whose hernia I treated by this method, death took place about ten days after the operation, from œdema of the larynx. There was no evidence, however, that the operation had anything to do with the fatal result, as he stated himself to be subject to similar attacks; besides, a post-mortem examination disclosed no abdominal trouble whatever. The steps of this method will explain themselves as we proceed. Let me exhibit, first, the implements necessary for the operation. This instrument resembles, in many respects, a bivalve speculum. It consists of two semi-cylindrical blades, three inches long, with handles five inches in length. The blades have each two grooves on the concave or inside, and a rod and screw at the extremity of the handles are designed to separate and so maintain the blades at the pleasure of the operator. Secondly, we need a stout needle, four inches long, mounted on a strong handle and with an eye at the extremity; and third, a shorter needle, three inches long, with a good wooden handle, and with an eye near its extremity. These, with an ordinary scalpel and some silver and silk thread, constitute the entire armamentarium. The parts are to be cleanly shaven, and the bowels freely moved, the day previous to the operation. The patient must be placed thoroughly under an anæsthetic, and the part carefully examined in order to insure the reduction of the hernia. An incision is carried two and a half inches down over the scrotum, beginning three-fourths of an inch below the external abdominal ring, and the skin carefully separated from the cellular and dartos tissue for some distance round. With the finger, this loose, raw structure, with the sac, is to be invaginated and thrust up through the external ring into the canal and well up to the normal situation of the internal ring. Next take the speculum, closed, and introduce it, as the finger is withdrawn, so that it shall maintain the plug of tissue in the canal as did the finger. Great caution is necessary in this step, that the instrument does not pass externally to the tendon of the external oblique muscle. Once assured that the instrument is securely in the canal, separate the blades by closing the handles, and taking the long needle bearing a silver wire, pass it along one of the grooves in the lower blade until it reaches the upper end, when it must be made to come out, through all the intervening structures, on the surface of the body over the internal ring. As soon as the point appears, unthread and withdraw the needle. The other end of the wire is next to be passed through the eye of the needle, made to traverse the other groove parallel with the first, and come out on the surface near to the first puncture. It is again unthreaded and withdrawn, when the two ends of the wire are pulled forward and twisted over a little cylinder of lint, thus maintaining the invaginated plug at the summit of the canal. This accomplished, the short needle is armed with a silk thread and passed across the canal between the blades of the instrument at three different points,—near the summit, at the middle, and just above the external ring. These threads are to be loosely tied, to prevent displacement. The speculum is now removed, a compress laid over the course of the canal, and a

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Spica bandage applied with a moderate degree of firmness. This completes the operation. Now in regard to the after-treatment. This consists in keeping the patient rigidly in the recumbent position, on no pretence allowing him to rise, and exhibiting a sufficient amount of opium to secure rest and quietude of the bowels. In two or three days some suppuration will appear about the silk ligatures. They must after this be moderately tightened from day to day, until they have cut their way out by ulceration, which will require from twelve to sixteen days. The silver wire may be removed in seven or eight days. In from three to five days after the ligatures have come through, a gently-pressing truss should be applied and the patient allowed to walk about. The bowels need not be opened for six or eight days after the operation, when they may be moved every two or three days. The diet, after the first two or three days, may be liberal.

ORIGINAL COMMUNICATIONS.

ON THE USE OF SKIMMED MILK AS AN EXCLUSIVE DIET IN DISEASE.

BY S. WEIR MITCHELL,
Member of the National Academy.

MY design in this and the brief papers with which I hope to follow it is to give my own experience in the use of skimmed milk as an alterative diet in certain cases of disease.

After reading Carel's paper, some years ago, I began to employ this very useful method of treatment, and since then have found repeated reason to congratulate myself upon the success which, in my hands, it has attained whenever the cases for its use were selected with discretion.

In dealing with the subject, I shall first make some general remarks upon the mode of using milk, and upon the effects observed in nearly all cases. Next, I shall relate histories of its employment in gastric disorders, in diarrhœa, in malarious and renal dropsies, and, finally, in nervous maladies. I hope to conclude with a study of the influence of the milk-cure upon the secretions and excretions. In following this path, I shall in some cases differ from Dr. Carel; but in general my views will be found to correspond with those held by this physician.

The milk is to be used as free as possible from cream; and if, as is generally the case in our cities, there is an abundance of ice to be had, I prefer to let the milk stand in a well-chilled refrigerator for twenty-four hours. It should then be carefully skimmed, after which it is fit for use. As Carel remarks, the quality of the milk goes for something, and perhaps, too, the surroundings,—since I have found persons who could not bear the treatment in a city, while in the country they throve under it admirably. As to temperature, it may be given warm—not hot—or cold, as suits the taste. In rare cases, where at first it caused nausea, I have had to use with it more or less lime-water during the first few days. In other instances the repugnance to its taste is a difficulty; and this may be overcome by faintly flavoring it with a few drops of coffee or with caramel. Other patients prefer to add to it a little salt; but, as a rule, I desire to give the milk alone as soon as possible.

Quantity.—The patient takes, to begin with, one or two tablespoonfuls on rising and every two hours during the day. When I followed Carel's rule of giving at once half a tumbler to a tumblerful (two to six ounces) four times daily, I found that few patients would bear it without nausea and early disgust. I increase each dose by a tablespoonful every day,—say three the second day and four the third day. Thus, if the patient begins at eight A.M., he takes, up to ten P.M., eight doses,—that is to say, about sixteen ounces. Now, this is the lower limit; nor have I been able, in the cases of females or delicate men, to give it more largely at first. Indeed, few women of sickly or sedentary habits are able to exceed, at any time, a pint and a half daily. After the fourth day it is best to separate the doses as you increase their amount, until they are taken at four equal intervals daily and the maximum quantity is attained. This varies greatly: I had one patient, a railroad contractor, who, living an out-door life of the most active kind, took daily for more than a year fourteen tumblers of skimmed milk, and this alone. Two quarts a day is the limit with most of my patients. I suspect, from Carel's account, that Russian patients must have more hardy stomachs.

Where people are well enough to live afoot, I have had little difficulty in the use of the milk; but in very feeble persons—and I have often given it to such—I have found it absolutely necessary to use with it, for a few days, brandy or whiskey, and even beef-soup, all of which I expect to abandon so soon as the patient can take milk enough to sustain his strength.

It is needless to say that for a patient to take steadily a diet of skimmed milk alone requires the utmost fortitude and all the moral aid which the physician can give. Carel thinks the first week the most difficult one, and this is usually the case; but sometimes the whole period of milk-use is one long struggle, even after we begin to allow a partial use of other diet. It is not, in these cases, hunger, but simply the craving for other food which tortures the patients. Most of them avoid the sight of food, in order to control their desires; and in one case I was much amused at a gentleman who said to me, in a guilty tone, "Indeed, doctor, I could not help it, but I stole an egg this morning."

Dr. Carel begins to alter the diet of milk after two or three weeks. I prefer to reach the latter limit before giving other food; but this, after all, is a matter for separate decision in individual cases. My own rule, founded on considerable experience, is this: Dating from the time when the patient begins to take the milk alone, I wish three weeks to elapse before anything be used save milk. After the first week of the period I direct that the milk be taken in just as large amount as the person desires, but *not allowing it to fall below a limit which, for me, is determined in each case by his ceasing to lose weight.* Twenty-one days of absolute milk-diet having passed, with such exception as I shall presently mention, I now give a thin slice of stale white bread thrice a day. After another week I allow rice once a day,—about two tablespoonfuls,—or a little arrowroot, or both, as circumstance may dictate. At the fifth week I give a chop once a day, and then, in a day or two, another at breakfast; and after the sixth week I expect to return gradually to a diet which should still consist largely of milk for some months. In children I sometimes use raw in place of cooked meat for a time; but grown people will rarely take it, although very often they are willing to take raw soup (Liebig's).

The symptoms developed under the use of milk are very interesting, and not all of them are told by Carel.

In no case have I seen any one gain weight during the first few days; but where the treatment succeeds the patient soon ceases to lose, and then slowly gains, in weight. This is usually the case in severe gastric and intestinal cases; but in some persons the loss of weight continues even after they are taking an amount of milk usually sufficient to sustain the body in an equilibrium. This is remarkably the case in very fat persons, who, as every one knows, are quite commonly small eaters. Taking three cases of dyspepsia at random (all women),

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I find this record: The first lost in two weeks 14 pounds of a weight of 131; the second lost 18 pounds of 120; and the third, 11 pounds of 117, her total weight at the start. In another case, where the quantity of milk taken was two quarts daily, and the exercise small, the man lost weight steadily up to the time that I began to give bread, when the gain was immediate and speedy (case, diarrhœa). Mrs. S., æt. 47, weight 194 pounds, inactive, sallow, feeble, dyspeptic, and a very small eater, lost, in four weeks, 30 pounds, with general gain in strength and vigor.

The state of the skin has seemed to me to improve in old cases of chronic gastric or intestinal disease, but in others there has been no change. The urine, in a few cases, is somewhat annoying during the first week, the patient having frequent calls; but commonly no such complaint is made, although in certain dropsies I have found the milk to act strictly as a diuretic. The changes in the urine we shall have occasion to study in future.

The tongue is very apt to become furred, and to remain white and rough for two or three weeks, and in some cases so long as milk is taken; but so far is this from representing a disturbed state of stomach that the dyspeptic usually finds himself, after a few days, in the enjoyment of an amount of digestive comfort long a stranger to his viscera.

The stools begin to show the milk tint—a yellowish or salmon hue—after forty-eight hours, and when the milk disagrees they are apt to be loose, while usually they are intensely tough and constipated. This feature of the use of skimmed milk is at times most obstinate and annoying. After some weeks of creamless milk, I have often resorted, in such cases, to unskimmed milk, and with good effect; but it is quite clear that even this, in adults, may constipate, as it never does in the child. Carel says that a little coffee in the morning is often sufficient to relieve the bowels; and, where a small cup of pure coffee can be used, this is true. I give it without sugar. Later in the treatment, fruit, fresh or stewed, may be used; but, as a rule, I find that a little Saratoga water on rising, and a half-grain of aloes with a grain of ginger at night, will answer; or, if these do not, then an enema is required. In some cases this symptom is simply unconquerable by any constant treatment, and twice it has forced me to abandon the milk. In another case—a lady who undertook the milk-cure unassisted—I was sent for on account of violent rectal and sciatic pain which followed every effort at defecation. She said she had had a daily stool, which was true, but the amount passed was trifling, and her rectum was packed with feces so tough as utterly to defy injections until I had mechanically broken up the mass. The pulse is usually quickened until the milk-diet is large enough to sustain the weight unchanged when it falls again. In certain cases of hypertrophied left ventricle with palpitation of the heart, the immediate effect is to lower the pulse and quiet the heart. The temperature I have only noted in two recent cases. I shall speak of it fully in a future paper. The nervous system is not strikingly affected by milk. I have once only, in a very stout and hysterical lady, seen vertigo and faintness follow its use and forbid its continuance; but, as a rule, it is in such persons soothing alone.

Carel makes no mention of one symptom of which many patients have spoken to me: this is an intense sleepiness. It is common, but not universal, and soon passes away.

In this brief sketch I have told plainly my own experience; and this I shall now illustrate by cases,—only some few of which I shall relate in detail.

In no diseases has the value of milk-treatment been more clear than in certain instances of stomachal disorders. It is needless to add that I have quoted here only such instances as had proved rebellious to all ordinary methods.

T. C., æt. 14, a frail and pallid lad, employed as errand-boy in a sugar-refinery, where he contracted the habit of continually eating sugar. After some weeks he began to have sick stomach, and at length incessant vomiting, for which a variety of treatment was employed without relief. Finally it was found that he was able to keep down small quantities of milk diluted with equal parts of lime-water. The amounts taken were still too small to sustain life, and he wasted rapidly. At this time he fell under my care, and was at once put upon an exclusive diet of skimmed milk, taking two tablespoonfuls every two hours. The vomiting ceased at once, and as the milk was increased in amount and the interval lengthened he began, in a week, to gain weight. In two weeks he was doing well on a quart a day, and at the twenty-first day he began to take bread. At the fourth week a chop was added, and at the fifth week he went to the country. At this time he was gaining weight and color. He felt none of the gastric distress after the third day, but the sleepiness was well marked for two weeks. At the second week a slight return of emesis obliged him to lessen the dose for a few days. In him, as in most young people, the constipation was readily overcome by a rhubarb pill at bedtime.

Miss C., æt. 52. Has had, for a year, attacks of violent pain, which are referred to the pit of the stomach, or rarely lower. They had no relation to her meals, but were easily brought on by fatigue. The natural ending of these spells seemed to be in slight emesis, and for a long time the very least vomiting gave instant relief, which, however, ceased to be the case after a year, when the attacks had become as frequent as two to four a week. The most careful search discovered no gall-stones in the stools, and only once was there bile in the urine. The matter vomited was rarely the food, but only thin mucus, not acid, and containing no sarcinæ or other substance which cast any light on the case. Alkalies, tonics,—for she was very pale and feeble,—stimulants, acids, pepsin, arsenic, and bismuth were used in vain. Hypodermic injections and opiates internally alike failed. In this therapeutic despair—even change of air having produced no good result—I advised the use of the milk-treatment; and, as her case illustrates alike the value and the difficulties of this plan of diet, I conceive it to be very instructive.

At this time her attacks were of almost daily occurrence. The milk was given cautiously—a tablespoonful every two hours—for two days, when it was doubled. On the fourth day she took four tablespoonfuls at each dose, and at the same intervals, but was manifestly not losing weight, although weak. A little whiskey added thrice a day bridged over this trouble, and was abandoned on the seventh day. Up to this time she had no attack, nor had she any up to the beginning of the fourth week, when the milk was given up. The reason for this was twofold. Her disgust at the diet was unconquerable; nor was I able by slight changes to secure continued good results. More complete alteration of diet brought back the attacks. I yet believe that these difficulties might have been overcome; but in her the milk caused a constipation so utterly invincible that not even the most powerful purgatives or enemata were of any avail. Needless to say that, with the promise of so much good from milk, no means was left unused to enable her to take it, but all alike failed us, and I was forced, in this case, to confess myself beaten. Mechanical means were finally needed every few days to break up the tough rectal accumulations, and so the milk was given up. Her case was probably gastrodynia.

Somewhat like it, in certain respects, was the history of a man who was sent to me from Elkton, Maryland, by my friend Dr. Ellis:

About nine months before I saw him he began to have increasingly severe attacks of pain, which came on an hour or two after meals and lasted nearly up to the next meal. The pain was sharp, and was referred to the epigastric region and to the left side below the ribs. There was a good deal of wind, occasional acid stomach, and no tenderness anywhere; bowels

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regular, urine high-colored, but free from albumen and depositing urates abundantly. He had been skilfully treated with a variety of drugs, but with no relief. On explaining to him the milk-diet, he professed himself able to carry it out. About two months later he returned to show himself, when I learned that he had lived on milk alone during the whole of this time, with immediate, enduring, and absolute relief from all his pains. He was then directed how to return to his usual diet. Several months afterwards I learned that he was still living partly on milk, and was well and vigorous.

Mrs. B., widow, æt. 33, had for years suffered from constant acid dyspepsia, for which she had been treated by several physicians, both at home and abroad. Her only relief consisted in the most careful choice of a minimum amount of food, and in the constant use of bismuth. She weighed 118 pounds, and was sallow and disfigured by an eczematous eruption.

During the first day of the milk-cure she took only one tablespoonful every two hours, and after this it was increased as I have described. In a week she was taking a little under a quart daily, and her weight was down to 114 pounds. A little whiskey was now added, and left off at the fifteenth day, when she was taking over two quarts of milk. The weight continued nearly steady up to the end of the third week, when she declared that even the perfect ease attained as early as the third day of the treatment was scarcely a compensation for the horrors of this exclusive diet. A little persuasion, however, enabled me to continue its use another week, when I began to give stale bread, and in a few days later venison. Her gain in weight from this time was strangely rapid, and five and a half weeks after we began the milk brought her up to 129 pounds, with a perfectly clear and spotless skin. The aloes pill and enema answered throughout to control her bowels.

It is now nearly a year since this time, but, despite her final abandonment of milk, she retains alike her good looks and comfort in digestion, having had in this time only one relapse, which yielded to a brief return to the diet.

I was very much struck, in another case, with the same remarkable improvement in the clearness and beauty of the skin which I have just mentioned.

Miss L., a young lady, æt. 20, of remarkable personal attractions, was seized with a violent attack of inflammation of the ileo-cæcal region, with the common accompaniments of intense pain, swelling, tenderness, and fecal accumulation, with violent vomiting. After a week or ten days the bowels were moved, and the attack subsided. The experience of several such illnesses finally taught me that the local use of ice over the diseased region, chloral internally, and no purgatives, for a week, gave the best and shortest curative result; but by this time the attacks recurred so easily and her general health had so suffered as to make some permanent relief imperative. At this period all the usual alteratives had failed to effect this end, and she was wasted, thin, and excessively sallow, with dark stains beneath the eyes. During three weeks only she took the milk, and I was then obliged by her urgency to add a chop daily. The effect of this diet was, both to me and to her friends, astonishing, in the sudden gain of weight and in the return of clear and delicate skin-tints. No less marked were the ease of digestion, previously much impaired, and the total disappearance of the hardening about the ascending colon. The bowels, somewhat to my surprise, were easily managed by a little rhubarb twice a day. In this case I did not hope for permanent relief save by six months of milk-treatment. So soon, however, as she felt well, I found it impossible to secure a continuance of its use, so that after some months I was not surprised to see her in a new attack. The case has value chiefly as showing that, with a tendency to a constipative disease, milk may still be used, and is illustrative of the profound change which milk sometimes effects in the nutritive system.

The above cases, selected for various reasons, are merely representative of difficulties or successes, and it would be quite possible for me to multiply either class. Suffice it to say that in old and unmanageable cases of dyspepsia, and in neuralgic disorders related to the gastro-intestinal viscera, the treatment by milk has been sometimes a reliable resource when without it I must have been in therapeutic despair.

EXOPHTHALMIC GOITRE.

BY J. J. CHISOLM, M.D.,

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WHILST general attention is being drawn to a disease the pathology and causes of which are unknown, cases which differ from an assumed type should be carefully noted. When these become sufficiently numerous, their symptoms can be analyzed and useful deductions obtained. Exophthalmic goitre is one of these obscure diseases now under investigation, its curiously combined symptoms of heart-disturbance, thyroid enlargement, and protrusion of the eyeball remaining, up to the present, unexplained. The disease is an insidious one, usually of slow approach, and of very chronic tendency,—the unsightly and annoying protrusion of the eye being a very persistent symptom.

The first prominent symptom—often the precursor of all the others, and said to be always present—is rapid and forcible cardiac action, with tumultuous palpitation from the least excitement. The frequency of the pulse is rarely below one hundred beats per minute; and the great nervous excitability of those affected, with the accompanying irritability of temper, nearly doubles the heart-beats upon trivial provocation. Organic disease of the heart is found only exceptionally. In some cases there may be hypertrophy of the organ, with atheromatous deposit in the vessels, but most frequently the cardiac disturbance is purely functional, and the persons afflicted are young chlorotic women with irregular or suppressed menstruation. The implication of the heart is so very constant that it is called the invariable symptom, and to many observers is a sufficient explanation of the enlarged thyroid gland and the undue prominence of the eye,—being, in fact, the point of departure of all the accompanying symptoms, and the key to the phenomena.

The goitrous affection involves, ordinarily, the entire thyroid gland, but either lateral lobe may alone undergo enlargement; and, although this hypertrophy is a very common complication, it is not invariably present. The protrusion of the eye is not commensurate with the size of the thyroid gland. In cases in which the exophthalmos is very marked, the thyroid enlargement may be scarcely perceptible; and, again, in cases of huge goitres there may be no eye-symptoms.

The prominent eyeball, with its frightened stare, is the symptom which attracts most attention. At times it protrudes so much from the orbit as to expose the greater portion of the spherical globe. This protrusion is rendered more conspicuous by the retraction of the upper lid, which widens the palpebral fissure and exposes more of the sclerotic. This blepharitic retraction, with dilatation of the pupil, is recognized as a very early symptom, and is supposed to indicate the neuropathological character of the disease, an abnormal condition of the sympathetic,—H. Müller having detected unstriped muscular fibres in the upper lid which receive nerve-influence from the sympathetic. The protrusion of the eye affects vision by stretching the optic nerve, and mechanically interferes with the movement of the ball. Ulceration of the cornea and destruction of the organ sometimes occur.

The following secondary symptoms in exophthalmic goitre are of greater or less frequency: Chloro-anæmia is nearly always present; also dyspepsia, with general debility and emaciation, with buzzing in the ears, dizziness, and fainting-spells, headache, vomiting, and deranged bowels. In females—by far the most frequent subjects of exophthalmic goitre—there exists disturbed or suppressed menstruation. The face is often flushed, with increased temperature, and local sweating, restricted to one side when only one eye protrudes.

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These various symptoms, which are more or less prominent, have from time to time attracted the attention of pathologists. Basedow, who in 1840 gave us the first succinct account of this disease, supposed chlorosis and serous effusions to be the cause. Piorry explained the phenomena as sequelæ of heart-disease, with consequent interference to the returning circulation,—hence protrusion of the eyeball through congestion of the orbital vessels. More recent observers, among whom are Trousseau, Remak, Recklinghausen, Friedrichs, and Graefe, consider exophthalmic goitre a disease of the sympathetic nerve, either excited by reflex disturbances from distant organs, as the uterus, etc., or by organic changes in its cervical ganglia, or by paralysis of the vaso-motor fibres coursing with the sympathetic. In autopsies, careful examination has exhibited the cervical ganglia of the sympathetic sometimes enlarged, at other times atrophic, and again apparently devoid of pathological changes, even under high magnifying powers. In some of these bodies the eyes have after death resumed their normal position, whilst in others the eyeballs continue to protrude, and in such the connective tissue which fills the posterior portion of the orbit has undergone hypertrophy.

In the following case, most of the so-called invariable symptoms were wanting, making serious breaks in the chain of phenomena:

Miss A., aged 19, stout and strong, has noticed for the past five months that her neck was getting large, and that the right eye was acquiring an ugly stare. These symptoms were not connected with any special bodily derangement, nor has she suffered in any way. Her present condition is as follows: she looks pale, although she is very stout and never complains of fatigue; she states that she has never had a color, and that she can walk many miles without any sensation of fatigue. Her digestion is good; she has a good appetite, is not troubled with constipation, and menstruates with great regularity, with a uniform loss and without pain. She has never suffered from cardiac palpitation; her heart-sounds are clear, pulse full and strong, 85 beats to the minute. She has never had flushings of the face, nor unusual sweating; the thermometer, carefully tried, detects no increased temperature. The right lobe of the thyroid gland is double the size of the left, although it is not conspicuously prominent. The right superior eyelid is pinched up, which prevents it from covering the protruding eyeball. When she looks up to the ceiling, the right superior lid is hidden completely by the orbit; when she turns the eye towards the floor, the lid does not cover more than one-half the exposed portion of the eyeball. When she tries to cover completely the protruding ball, the right superior lid quivers incessantly. The movements of the eyeball are somewhat impaired, the pupil is enlarged, but sight, for both near and distant vision, is perfect. Ophthalmoscopic examination shows no abnormal fulness of the retinal or choroidal vessels.

In the above case the exophthalmos and goitre of the corresponding side of the body appeared and progressed simultaneously, but all the other symptoms so marked in by far the majority of cases—viz., cardiac, uterine, gastric, and cerebral complications, and debility—were wanting.

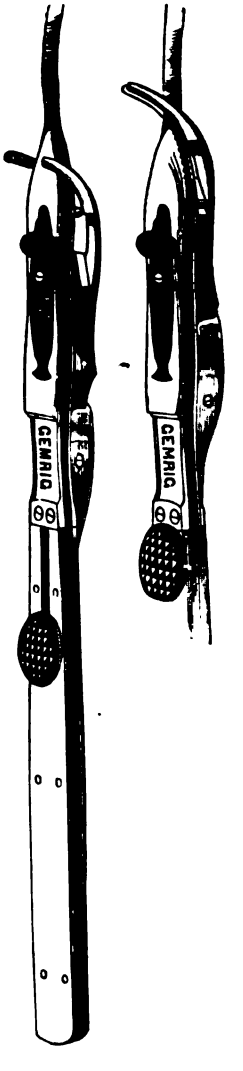
TORSION FORCEPS

FOR ARRESTING ARTERIAL HEMORRHAGE.

BY ADDINELL HEWSON, M.D.,
Surgeon to the Pennsylvania Hospital.

THE decade of years which has passed since the late Professor Simpson first made known his proposal to employ Acupressure instead of the Ligature as a means of arresting hemorrhage from large vessels has furnished an experience of that measure sufficiently ample and satisfactory to dispose many surgeons to look with considerable favor on the revival of Amussat's notion to use torsion for the same purpose. With the revival of this notion have come many suggestions of modifications in the process, with the view of increasing its efficiency. One of the most attractive and plausible of these has been that of employing a preliminary division of the middle and internal coats of the artery, similar to that effected with the ligature, by means of a pair of forceps made for the purpose,—a plan which, I believe, originated and has been well tried in London. My own experience in the use of this modified form of torsion has been most satisfactory; and the purpose of this communication is to briefly call attention to a pair of forceps which I have devised and found to answer admirably for the purpose, in doing away with the necessity of using both hands. They consist (Fig. 1) of four blades, one set being broad, flat, and well rasped, with a sliding catch in the vicinity of their points. These blades are for seizing the bleeding orifice, and when their catch is fastened will hold the vessel firmly, and allow of its being drawn out from the surrounding tissues, if desirable. All these steps being accomplished, the other—the curved—set of blades are to be slid forward by pressure on the broad button in the handle of the instrument. By continuing the pressure on this button, these blades will not only be thrust beyond the ends of the other blades, but, by means of the bevelled slot in each of them becoming wedged on the pins to be seen on the under surface of the straight blade on which they slide, they will, when their ends are beyond the other set, be forced together so firmly as to completely sever the middle and internal coats of the vessel at the point where the torsion will be most positively exerted afterwards. The margins of these blades are rounded, where they so come together, to the size of the ordinary silken ligature, and when they have done their work the blades are to be withdrawn: their effect on the artery can then be readily seen. The next step in the procedure is to twist the vessel. This is readily done by rolling the instrument on its axis. Two or, at the utmost, three complete rotations of this kind are all that is required, and the instrument may be removed at once, without the least fear of the occurrence of any bleeding. I speak with confidence on this point, as I have used this mode of arresting hemorrhage several times on vessels as large as the adult brachial and tibial arteries. The essential feature of these forceps is the mechanism by which the curved blades are thrust forward along the edges of the flat blades, made to compress, in a thorough manner, the vessel, and are then withdrawn to their original position before the torsion is commenced. This mechanism does not consist alone in the bevelled slot and pins before alluded to, but also in the manner in

FIG. 1. FIG. 2.



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which the blades are moved forward and back again, which is not by a rod connected with the button at one end and firmly fastened to the forceps at the other, but by a flat bar passing over the head of the forceps and then bifurcated so as to embrace the blades in their springy portion, but not fastened to them. This sliding bar has so much freedom that it causes the blades to be compressed and thrust forward when pushed towards the point of the forceps, and to free them from such compression and draw them back when pressure is made on the button in the opposite direction.

ON PERMANGANATE OF POTASSA.

BY B. HOWARD RAND, M.D.,
Professor of Chemistry in Jefferson Medical College.

THIS compound having become a popular "new remedy" with many practitioners, and having undoubtedly valuable as well as dangerous properties, I propose to discuss these in a few words.

The chemical nature of the salt need not be dwelt upon. Its method of preparation, with the chemical changes involved, will be found in the U. S. Dispensatory. It is enough to say that it is, perhaps, next to chromic acid or chloro-chromic acid, the most active oxidizing agent known. In contact with reducing agents or organic matter, it is instantly decomposed, becoming reduced to black oxide of manganese and caustic potassa. The oxygen given off appears to be, in great part, in the form of ozone, and rapidly attacks and burns up all varieties of organic matter, although some resist longer than others.

In consequence of this power of oxidation, it has been largely employed externally as a detergent and deodorizer, and internally in diseases in which an oxidizing agent is supposed to be indicated.

As to its value where used internally there is abundant testimony, yet, I fear, but little evidence. The enthusiasm with which a new remedy is employed by the practitioner seems to give faith to the patient, and "cures" follow which are properly recoveries. The same is true of secret remedies, which, however apparently successful, are generally abandoned when their true nature becomes known.

From its caustic character, permanganate of potassa is necessarily used internally in small doses,—that is, about half a grain. One grain of the salt is supposed by the chemist to be decomposed by five grains of ordinary organic matter, or half a grain by two and a half grains of the same. Suppose the permanganate to be given in solution in distilled water, the mixture made in absolutely clean vessels and dispensed from the same,—conditions very rarely fulfilled in practice,—we have the chance of its not meeting with two and a half grains of organic matter in its passage to the stomach. Then, considering the organic contents of the stomach, and the fact that the tissues themselves are acted upon, we see how utterly impossible it is that any of the permanganate shall enter the circulation, there to give up its oxygen.

Moreover, as its color and taste, when in solution, are objectionable to most patients, some practitioners exhibit it in pill, in which form it is, in most cases, decomposed before it is swallowed. Dr. C. M. Fenn published, in the *Pacific Medical and Surgical Journal*, in 1867, a paper, which was largely copied, and is noticed in *Ranking's Abstract*, xlvii. 18, lauding the virtues of the permanganate in rheumatism, and giving successful cases. He gave half-grain doses in *raspberry syrup*. He believes that it converts lactic into carbonic acid. He certainly did not administer permanganate of potassa. Whether the black oxide of manganese and caustic potassa, which the patients did swallow, would convert lactic into carbonic acid, or otherwise cure rheumatism, we cannot say; but it is, at least, not probable.

For external use in many surgical cases, the permanganate of potassa possesses much value as a stimulating and deodorizing application. We owe to Mr. Condy, of London,* its introduction as a deodorizer. It is highly efficient, and at the same time is itself without smell. There are, however, a few practical points connected with its use which seem to be often neglected. It should not be applied to bandages or dressings, as it is decomposed by the organic matter of the fabric, and is lost; at the same time the dressings are discolored and rotted. It should not be applied with a sponge, for the same reason. Shallow dishes, containing a strong solution,—about one or two ounces to the pint,—allowed to stand in the sick-room, will be of much use in removing foul smells. It is not adapted to solid filth, although highly efficient, on account of the quantity required and consequent expense, but may be used with excellent effect in chamber-vessels, etc., after they have been emptied and rinsed.

A word as to economy. One ounce of the crystallized salt costs about as much as a pound of the crude, which is just as good for deodorizing purposes. The crude gives a greenish solution, which even while cold, but more rapidly and completely upon boiling, passes into the deep red so characteristic of the permanganate, and is fit for use.

As a test for organic matter in air and water, its accuracy has been called in question, on the ground that it does not attack all kinds of organic matter with equal facility,—some, as starch, resisting its action for a long time. It must be admitted, however, that it is, at present, the only *practical* test that we have, and certainly shows very rapidly and clearly the presence of *hurtful* organic matter in water or in air. It can be applied by any one, it being only necessary to use a weak solution; the disappearance of the color indicates the presence of organic matter. In time of epidemics, such as cholera or dysentery, this test might be of much value in singling out the contaminated from the pure water. It is perhaps well also to recall the fact that this test forms the readiest means of purifying foul water. If added until the water acquires a permanent faint pink tinge, we are certain that injurious organic matter has been destroyed. Then, as Condy suggests, if a piece of clean stick be put into the liquid, or if a little tea or coffee be added, the pink color will disappear, and the water will be fit for use. The very small amount of potassa remaining in solution could not possibly do harm, as in any ordinary case it would not amount to one-hundredth part of a grain to the gallon.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

POISONING FROM 460 GRAINS OF HYDRATE OF CHLORAL.
SERVICE OF J. L. LUDLOW, M.D.

Reported by Emory Eshelman, M.D., Resident Physician.

AT 5½ o'clock in the morning of September 18, Mrs. B., a nurse in the Women's Medical Ward, was found in a deep sleep, from which she could only with very great difficulty be even partially awakened. Thirty grains of ipecac. were immediately given, under the supposition that some dangerously narcotic dose must have been taken. As this failed to produce emesis in ten minutes, an attempt was made to administer a mustard emetic, but she could not be forced to swallow it. At 6 o'clock the respirations were 35 in the minute, and heavy and stertorous; the pulse was quick and

* Air and Water, their Impurities and Purification. London, 1862.

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frequent, numbering 140 in the minute. The face was somewhat flushed, and the extremities cold and livid. No change was observed in the pupils, except that under the influence of light the left one contracted, while the right seemed scarcely affected. A bottle marked "Hydrate of Chloral," which was known to have been full only a few minutes before the occurrence of the alarming symptoms, was now discovered nearly empty. Suspecting this medicine to be responsible for the woman's condition, she was transferred to a chair, mustard poultices were applied to the extremities, and vigorous flagellation was resorted to. This severe treatment was pursued for nearly one hour before the least sign of returning consciousness was appreciable. She now endeavored to raise her hand to her face, which I was slapping with my hand. Before this time every muscle was *most completely* relaxed. Another indication of approaching consciousness was an occasional moan, which the flagellation would draw from her; but the moment the treatment was discontinued she sank again into the most profound slumber. At this juncture a very powerful faradaic current was applied along the spinal column, the course of the phrenic nerve, and to the chest. As soon as the poles came in contact with her body, she showed symptoms of discomfort, by writhing and moaning as before. After continuing this mode of treatment for half an hour, she began to open her eyes at short intervals, and with some difficulty made us understand she was suffering; but the moment the poles were removed she sank again into the deepest sleep. At 9 o'clock it was observed that when the poles were applied she endeavored to get off the chair and away from the object causing her suffering. The assistants were now directed to try to make her walk, with one on each side to support her and another behind to stimulate her vigorously with the palm of the hand. She made some effort to walk, but with a very staggering gait, requiring all the strength of the assistants to keep her from falling to the floor. The application of the battery and attempts at walking were continued alternately for two hours, at the end of which time (11 A.M.) she had so far recovered as to be able to walk unaided and to converse in an intelligent manner. A small quantity of whiskey was now given, and soon after a good drink of beef-tea, containing a considerable amount of capsicum. Considering that it would now be safe to allow her to sleep off the remaining effects of the narcotic, she was put to bed, and slept soundly from this time until 6 P.M., being easily awakened at intervals of an hour or two for the purpose of receiving nourishment. She soon fell asleep again, and remained in this condition until the following morning, when she awoke, feeling quite sore, and with a slight headache, but otherwise very comfortable. There was no sickness of the stomach or constipation of the bowels following. Her statement is that, having been up all night nursing a patient with delirium tremens, she went to the ward office, about 5 A.M., in search of something to relieve a headache under which she was suffering, and, finding the solution of chloral, drank the greater portion contained in the bottle. She immediately felt a burning sensation, and swallowed some water to relieve it; beginning to feel faint already, however, she endeavored to reach her bed, but, according to the statements of those around her, fell to the floor before reaching it. She remembers distinctly going to her ward, but nothing after that until recovering at 11 o'clock the following morning. She has no knowledge whatever of either the flagellation or the application of electricity. The bottle from which the dose was taken contained 10 drachms and 2 scruples of hydrate of chloral, dissolved in 4 ounces of cinnamon water, and had been brought from the drug-store only the previous afternoon. One of the physicians used 6 fluidrachms of the solution, containing 120 grains, for some of his patients, but no more was taken by any person, except this woman. She left in the bottle only 3 fluidrachms, containing 60 grains of chloral, each fluidrachm of the solution corresponding to 20 grains. Supposing, then, that she swallowed the rest of the four fluidounces (and it is safe to presume she did, from her own statement), she took at least 460 grains of hydrate of chloral. Her pulse was carefully watched throughout, and at the time when she seemed to be most thoroughly under the influence of the poison it was wholly impossible to be counted, so small and frequent was it. As the stupor became less marked, the pulse gradually approximated towards normal frequency, remaining at 100 beats per minute at 11 A.M.

The treatment above described was adopted on account of the resemblance between the symptoms present and those which result from an overdose of opium or some of its alkaloids; and from the threatening condition which was developed in this patient by this large dose of chloral, it seemed as though her sleep would have passed into the sleep of death, had it not been for the timely application of faradization and vigorous flagellation. At the time of the occurrence of the case, I was not aware of the existence of any supposed antidote for the hydrate of chloral.

SURGICAL CLINIC, SATURDAY, SEPTEMBER 10. SERVICE OF DR. BRINTON.

The lecturer exhibited and commented upon the following cases:

1. A case of acute synovial inflammation of the elbow-joint, occurring in a man aged 21. The treatment which had been successfully pursued in this case consisted in the persistent application of cold, according to the following plan: The affected joint, first having been protected by a double layer of flannel, was placed between two bladders, each half filled with crushed ice. These bladders were allowed to remain for four or five hours at a time; they were then removed for an hour, at the expiration of which period they were again placed in position. This treatment was continued for six days, with the result of subduing the inflammation of the joint. The condition of this patient prior to the application of the above dressing was threatening. The agony of the affected joint was intolerable; sleep, even under the exhibition of strong anodynes, was almost impossible; and the symptoms of constitutional irritation were marked. The effects of the cold dressing were immediate and most happy: the local pain ceased; the patient slept; and the constitutional symptoms commenced to diminish. The great value of this dressing, the lecturer stated, had been abundantly manifested during the late civil war, in the treatment of gunshot and other injuries occurring in the vicinity of, or involving, the larger joints.

2. A case of mastoid abscess in a negro man aged 20; treated by incision.

3. Extra-capsular fracture of the femur in a woman of 54. This patient had fallen from a stool, striking upon her hip. The symptoms of the injury were well marked, viz.: swelling and contusion of the hip, shortening of the limb to an extent of one and one-quarter inches, slight shortening of the femur, eversion of the foot, and rotation of the trochanter major over a shorter arc. The differential diagnosis of this case was explained to the class.

[This patient died a few days subsequently, and on post-mortem examination an extra-capsular fracture of the femur, involving the trochanter major, was found.]

4. Phagedenic ulcer of the buttock and vulva, in a woman of 26; treated locally by nitric acid, and internally by the potassio-tartrate of iron.

5. A case of recto-vaginal fistula in a woman of 40. This woman contracted a vulvar chancre some months since, and has now secondary syphilis. She suffers also from a recto-vaginal fistula, but does not seem able to furnish any particulars as to its development. Upon examination, a small fistulous opening can be detected upon the posterior wall of the vagina, about two inches from the external orifice. This fistula communicates with the rectum, rather more than half an inch above the external sphincter, and the track also opens externally upon the perineum, about one and a half inches from the margin of the anus. The operative treatment in this case consists, in the first place, in the destruction of the anal portion of the fistula; and secondly, in the obliteration of its opening into the vagina. The lecturer now inserted a seton through the anal fistula, preferring this to its immediate division by the knife, in consequence of the great thickness of the tissues. He stated that so soon as the seton should cut its way nearer to the surface it would be removed and the remaining tissues would be incised. Subsequently he proposed to pare the edges of the vaginal fistulous orifice, to insert one or two stitches, and thus attempt to procure union and effect a permanent cure of the case.

[A few days later the seton was removed, and the rectal wall divided. The wound was then packed with lint.]

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SATURDAY, OCTOBER 15, 1870.

EDITORIAL.

THE MORDAUNT DIVORCE CASE.*

THIS is the trial, our readers may remember, that ministered so strongly, a few months since, to the prurient curiosity of all that part of the English public to whom a scandalum magnatum would be a superlative delight. With the moral aspects of the case, of course, we have no concern; but it involves some medical problems that are well worth our attention.

It was a suit for divorce, brought by an English baronet for adultery on the part of his wife, a young and handsome woman, with many admirers. The petition was met by the plea that when the citation in the suit was served upon the respondent—namely, the 30th April, 1869—the respondent was not of sound mind, and never had been since. The petitioner took issue on that plea, and that was the issue actually tried. The trial presented much less of that irreconcilable testimony and conflicting medical opinion that have become much too common for the credit of the profession, but a result that is burdened with infinite doubt and perplexity, arising not so much from the inherent difficulty of the subject as from a deficient disclosure of the facts, which seems to be partly intentional.

It appears that Lady M. was confined on the 28th of February, 1869, and that two days after, she declared to the nurse that the child was not her husband's, but Lord Cole's. This statement she repeated to others shortly after, and to her husband, telling him that "she had been very wicked; that she had done wrong with Lord Cole, Sir Fred. Johnstone, and the Prince of Wales, and others, and in open day." On the strength of these statements, which were confirmed by other evidence, her husband sued for a divorce, and the trial came on, February 16, 1870. As just stated, the actual issue was her mental condition on the 30th April, 1869, the day when the citation was served. The requirement of the law would be answered by proving that she was insane at that time; but her own reputation required that she should be shown to have been insane when she made the statements in question.

No one was disposed to deny that, at the time of the trial, Lady M. was, and had been for several months, unequivocally and extremely insane. The evidence was very strong, though not undisputed, that such also was her condition in July, August, September, and October. In regard to her mental condition previous to that period, and especially in March and April, the evidence was conflicting, but more in respect to opinion than to matters of fact.

Dr. Priestly, Dr. Tuke, Sir James Alderson, Dr. Gill, examined her in the month of May, and several of them again in July. Dr. Burrowes saw her in July, and from May till August she was attended by Dr. Harris. These gentlemen all concurred in the opinion that Lady M. was clearly insane; and if this opinion were fortified only by their acknowledged professional eminence, we could hardly question its correctness; but the indications of disease which they mention place it beyond a doubt. She conversed with them at first in monosyllables, and then refused to reply at all, sometimes "bursting into a silly laugh." "She could understand nothing but the simplest things." "She seemed to have no power of mind at all." "She had a singularly absent expression, and would often burst into a meaningless laugh without any cause." "She complained of her teeth; but when asked to show them she kept her mouth shut." "Alluded to her unfortunate position, but could make no impression on her mind. On one occasion pressed her very earnestly on that point, and asked what she thought was best to be done. She turned around and said she thought a dose of castor-oil would put it all right." "I spoke of her child, her husband, and of the condition she was in before the world. I might as well have spoken to a piece of wood." "She had a delusion that there were dead bodies in the room." "She thought she had been poisoned." "She also had a delusion as to her husband's absence." Her "lady companion" during this period testified that in taking food she would use her fingers; that when out walking she would pick up dirty articles—dried mud; that she showed a total want of modesty; that she would go about the house with scarcely anything on; that she was dirty in her habits, and had to be washed like a child; that sometimes she would not speak for days; that she constantly walked about the house at night, and went into other rooms; that she went into the servants' rooms, until they were ordered to lock their doors day and night; that she once escaped with nothing on but a pair of stockings, slippers, an opera-cloak, and a muff, and went into the drawing-room; that she was bribed with pennies to go quietly to bed; that when driving out she asked the driver of the fly to lend her money to pay himself; that once when she had a headache she put a cologne-bottle to her feet and sat in that way; that she believed there was a plot against her and she had discovered it in a miraculous manner. Another witness, her personal attendant, testified to many of these facts, and some others, viz.: that she generally refused to take food, thinking it poisoned; that when driving out she would laugh very much and lean out of the carriage and spit; that she thought one of her nurses connected with the devil; that she would get excited, and once boxed witness' ears without provocation. Against all this proof of insanity during this period—

* An Official Report of the Cause Célèbre, Mordaunt v. Mordaunt, Cole, and Johnstone, etc. London. Pp. 825, 8vo.

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viz., May and June—there appeared little more than the evidence of her accoucheur, who visited her twice a day up to the 18th March, and saw her again on the 10th July. He says he did not regard her as insane at either period; that he did not see anything to indicate that her mind was wandering, or that she was not in full possession of her senses. Considering that in July he went into her room but three times, and was there each time but five minutes, it is not strange that he failed to see what was obvious enough to others. A Dr. Jones, who also saw her on the 10th July, after stating several incidents that could hardly be expected of sane people, said "he believed her mind was broken down," and "that if there should turn out to be no foundation for certain stories, he should attribute her state to excitement." This gentleman's notions of insanity were evidently not learned in any school of the prophets, judging from his statement that "puerperal insanity is a very intractable malady, and likely to last three or four years, during which there would not be the least interval of reason." Dr. Tyler Smith, who calls himself "Physician-Accoucheur to St. Mary's Hospital," endorses the opinions of the last two witnesses; and though he says he has had much experience in puerperal mania, it must certainly have been a peculiar one,—for when asked to state the signs of this disease he says he should "expect perfect loss of intellect" that would be recognized by every one.

The indications of insanity mentioned by these witnesses are too positive, too numerous, and too lifelike to leave any room for doubt. To those much conversant with insanity, they present a picture of the disease whose original may be seen any day in any hospital in the land. The last-named gentlemen would not ignore them altogether, but their version of the matter was that she was shamming; and in this notion they were joined by some of the domestics. To discuss seriously a notion so unfounded as this would be but a waste of words. It is a curious phenomenon, and one not very uncommon, that people who know the least about insanity are most ready, in actual cases, to believe it to be simulated.

Having now traced the presence of the disease back as far as May, let us look at the evidence respecting her mental condition in April and March. It is not so full and particular as might be wished. Mental derangement, if present, was not very clearly manifested in her ways and manners, while the notions that seemed like delusions might have been actual verities. And this is the predicament to which we are reduced, viz.: if the said notions are shown to be utterly groundless,—mere figments of a distempered fancy,—then the date of the disease admits of no further question; while if they are proved to be wholly or partly true, we are obliged to look for signs of insanity somewhere else, bearing in mind that the fact of her insanity does not depend on the truth or falsehood of those notions. Lady M. might have been both guilty and insane. If she had actually sinned, it is not strange that when the mind began to lose its self-control she should have proclaimed to all around her those shocking things, the thought of which had never left her, probably, for a single hour since they were done. That would be no new phase of insanity. The physicians who saw her in the early stage of the case—biassed, probably, by the fact that these statements of hers were of a kind not unfrequently made in puerperal insanity—came rather hastily to the conclusion that they were delusions, and that she was insane, thus supposing a connection where none necessarily existed. A careful examination of the circumstances will show that they may have been mistaken.

Whether Lady M.'s confessions sprung solely from a disordered imagination or not, is a question to be determined by the evidence touching the matter of fact, as in any other case. We shall not discuss it here, as it would be aside from our present purpose, which is to consider the case solely in its professional aspects. The evidence, indeed, was very strong,—strong enough, probably, apart from any confessions or any question of sanity, to have procured a divorce, had that been the issue. Our question is whether these confessions, supposing them to have referred to actual occurrences, are incompatible with the existence of insanity. One may do a sinful deed in the perfect possession of his senses, and yet to confess that deed, under certain circumstances, might be a strong indication of insanity. Was this confession of Lady M. a rational thing, induced by the motives and feelings which usually prompt confession of sin? Was it made under the conviction that her guilt had been discovered, and that she had better make a virtue of necessity by frankly confessing it herself? The evidence does not reveal one scintilla of proof that her guilt was known. Some of the servants testified to a few instances of imprudent familiarity with gentlemen, but it does not appear that they led to any scandal out of the servants' hall, even if they did there. Are we to suppose, then, that she disclosed the guilty secret under the compunctious visitings of conscience, determined to make the only reparation she could to her injured husband, and then to meet the appointed fate of the adulteress? Did she evince any penitence for her sin,—a single regret for the distress she had caused to others? Not at all. Of all that circle whose peace and happiness she had so terribly marred, she manifested the least disturbance. There remains but one solution of the problem. Under the stress of disease, deprived of foresight and self-control, distracted by the rush of violent emotion, with her perceptions so obscured and confused that the creations of fancy became mixed up with actual occurrences, this woman gave up the inmost secrets of her soul, as multitudes of insane people had done before her. Proof of this is furnished by almost every page of the record, in which is exhibited that lack of logical coherence and of the proper apprehension of the relations of cause and effect so characteristic of the insane.

Hancock, the nurse, one of the husband's witnesses, testified that, the first night after her confinement, Lady M. asked her if the child was diseased, and was assured

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by her that it was not. The next night, having been comfortable during the day, she recurred to it again. "Nurse," she said, "are you sure there is no disease to be seen in this child? and did Mrs. Cadogan or Mrs. Caborn say anything?" The nurse replied, "There is nothing to see but what is common." The next night, she says, "Lady M. began talking again on the same subject. I begged her ladyship to be quiet, and told her it would make her head bad if she talked too much. She said, 'If you don't let me talk, I shall go mad; for I have something to tell you, and I must and will tell you to-night.' I offered to fetch Sir Charles, that she might tell him. She said, 'No, I will tell him another time.' She went on to say, 'This child is not Sir Charles's at all, but Lord Cole's.' I said, 'Pray, for goodness' sake, be quiet, and say no more.' She said, 'It took place the last week in June, while Sir Charles was in Norway. Lord Cole visited me the very last week in June.' I then said it was almost an impossibility that any married lady should know it was the last week in June; and she said, 'Oh, but I do know, for it was Lord Cole's.'" On the ensuing day "the child's eyes began to be bad." Whereupon Lady M. says, "I know that Sir Frederick Johnstone is a fearfully diseased man." On the next day she said to the nurse, "The time is come when the thing must be known, in consequence of the child's eyes." On the following day she said "she had tried to tell her husband, but the words seemed as if they would choke her." Two or three days afterwards "she got a little excited," says the witness, "and asked me to fetch Sir Charles up-stairs. When he came, she said to him, 'Charley, this child is not yours at all. I have been very wicked, and done very wrong with more than one person.' The same night or the next day she said to him that it was Lord Cole's child." A few days afterwards she said to witness, "Well, I have made him understand at last." The witness replied, "Suppose he goes out and makes inquiries,—what then?" "Why," said she, "there'll be an awful row." "I said," continues the witness, "'Whatever you do, send for Sir Charles, and don't let it go any farther.' She said, 'I shall humble myself to no man.' I said, 'What are you going to do?' She said, 'I have not made up my mind.' About two in the morning she woke me, and said, 'I can see it all quite plain now. I have quite made up my mind as to what I shall do: I am going to be poorly, or something else; Sir Charles and my father must make it all right, and I shall go abroad as soon as I can get well.'" When it was decided to send for another physician to see the child's eyes, she asked witness to give the child laudanum, "because, if the strange doctor came into the house, all would be found out."

Such irrelevant, thoughtless, absurd expressions, in the very crisis of a fate that might have appalled the stoutest heart, are inexplicable on any theory that supposes her to have possessed a sound mind. Even if she believed that the child had contracted a disease which she had received from Sir F. Johnstone, the apparent fact would not necessarily have implied to others criminal conduct on her part. Her own vaginal ailment had been pronounced by her own physician to be not specific, and her husband had made no complaint. Thus her case was strong enough to save her, if not from suspicion, at least from the degradation of convicted guilt. How little she was truly conscious of the tremendous consequences of her statements is abundantly apparent. At the very time she made them, she said to the vicar's wife, "I did it only once or twice in London. I'll soon make it right with Charley." Subsequently she seemed to have some faint idea of the damage her confessions had done her. She said to the vicar, 25th April, "Charley will not be able to prove the nonsense that I spoke; and if I were able to see him, I think I could set the matter right." Previously to this she had written to her nurse, "Pray say nothing more about the nonsense I talked when you were here." It is a well-known trait of insanity that in those casual liftings of the cloud that sometimes mark its course, the patient recognizes the consequences, if not the utter groundlessness, of his statements. But it does not appear that Lady Mordaunt, at any time, could understand why her confessions could cause separation from her husband. Is any stronger proof of insanity required than this fact, that a woman, born and educated in one of the highest social circles in England, could suppose that she might commit the unpardonable sin of woman without being driven forever from her husband's presence?

The indications of mental disease at this early period, though confessedly obscure, were clear enough to convince Sir James Y. Simpson and Dr. Tuke, who saw her in March, that she was suffering from puerperal mania, which belief, so far as the latter was concerned, was quite independent of her confessions. Although her discourse betrayed no obvious aberration, and she appeared to her servants as rational as ever, and even to her physician, yet the evidence furnishes proof enough that her mind was not in its normal state, to say the least of it. On the night of her confinement she declared, "If you don't let me talk, I shall go mad." "On the 6th March," said a witness, "she seemed to be wandering. She seemed in great distress of mind. She seemed to be in a rapt state." Her mother is reported to have said, on this occasion, "Oh, she is only hysterical, as her sister was at her confinement." Dr. Jones, who saw her on the 10th March, while he declares she was not suffering from insanity, admits that "there was an hysterical condition arising from mental emotion." On the 10th March, Sir Charles wrote to his wife's mother, as follows: "Harriet has not been quite so well since I last wrote. She has been hysterical and rather nervous and excitable, but without fever. Dr. Orford says there is no cause for anxiety,—that it will pass off." The reporter adds that other letters of a similar import, written by Sir Charles to other members of the family, were read. "They described Lady M.," he says, "as nervous and excitable; as incapable of understanding what was passing about her; of not knowing him, or those in attendance on her; and of forgetting all about

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the baby, whose condition was spoken of as so bad—blindness being threatened—that all hoped for its death." It appears, too, that her physician visited her twice a day from the time of her confinement till the 18th March. Vague and indefinite as much of this testimony is, it may be fairly inferred from it that from the very beginning Lady M. was in an abnormal state of mind. True, setting aside the confessions, the symptoms of bodily or mental disease were not very demonstrative; and the same may be said of most cases during the first few days, or what is called the incubation, of the disease. It is not common, certainly, in puerperal or any other form of acute mania, for gross, persistent delusions to make their appearance as the first and almost only indication of mental disturbance, but it is not so far from the line of ordinary occurrences as to be regarded as impossible. There is nothing in the history of puerperal mania that would warrant us in disbelieving, against reasonable proof, that it might be ushered in in this manner.

Here the question of Lady M.'s mental condition, for all legal purposes, is closed. She is shown to have been insane from the period of her confinement until after the 30th April, and these confessions to have been prompted by none of the motives or sentiments which ordinarily lead men to confess their sins. Yet, notwithstanding, it does not necessarily follow, as has been already remarked, that they referred to imaginary occurrences. But it appears that the Prince of Wales and Sir Frederick Johnstone, both of whom she said had been partners of her guilt, declared on oath, in court, that they were innocent. We may be bound to believe what they say, and conclude that, so far as they are concerned, she was laboring under a delusion. But Lord Cole, whom she charged with being the father of her child, has never declared his innocence; and this, under the circumstances, is equivalent to a confession of guilt. It is scarcely possible that, if he were innocent, he would have failed to follow the example of the other gentlemen, and thus to relieve both himself and the lady of the infamy of their position.

This, then, seems to have been the true state of the case. Lady M., the moment she came within the shadow of that eclipse that was soon to darken her whole mind, began to give audible utterance to the predominant thought of her soul. Nothing is more likely—judging from our knowledge of the mental movements in disease—than that it should have been uttered. Nor is it strange that, in the confusion of ideas which often marks the opening scenes of insanity, the line between the subjective and the objective was completely effaced, and that she believed that those with whom she had sinned in her heart had also committed the overt act. There is nothing in the history of insanity, or in the circumstances of this particular case, opposed to this view; while it furnishes an explanation of what is quite inexplicable in any other way.

Dr. Tuke puzzles us exceedingly by his opinion that Lady M. was suffering, in April, "from puerperal insanity, and also catalepsy." Catalepsy is something that could be neither overlooked nor mistaken for something else, and it must have been observed by the attendants as well as by the doctors. So important a point as this would hardly fail to appear in the evidence of the nurses and servants; and yet not a syllable respecting it is to be found in their examination. Dr. Tuke is not a man to make groundless or careless statements on the witness-stand or anywhere else; while it is possible that the reporter, after the manner of his kind, may have taken such liberties with the evidence as seemed best to meet his ideas of what it should have been. But still we are puzzled. Nor can we understand how a man who has seen so much mental disease as Dr. Tuke should have so readily concluded that Lady M.'s confessions were, in every particular, the offspring of delusion. Surely he must have observed that the insane, under such circumstances, often utter some surprising truths, though mixed, perhaps, with falsehood and nonsense. Delusions like those of Lady M. are common with the subjects of puerperal mania; but this is scarcely ground enough for his conclusion that her statements were wholly and unequivocally delusions.

REVIEWS AND BOOK NOTICES.

THE PRACTICE OF MEDICINE. By THOMAS HAWKES TANNER, M.D., F.L.S., Member of the Royal College of Physicians, etc. Fifth American, from the Sixth London Edition. Enlarged and thoroughly revised. Pp. 1200. Philadelphia, Lindsay & Blakiston, 1870.

In this edition of Dr. Tanner's already excellent work we have at once the most comprehensive and best treatise which is available to the student of medicine, and perhaps to the general practitioner as well. For, covering not only the entire subject-matter usually comprehended in works on the practice of medicine, but diseases of women and venereal diseases also, the single volume becomes the repertory in which everything may be found. Nor do we think this comprehensiveness is at the sacrifice of sufficient attention to individual subjects for the *student*, since the book is one of twelve hundred large octavo pages; though we should hope that no *practitioner* will confine himself to any single volume in seeking information with regard to a special disease. It is, in almost every sense, thoroughly revised and enlarged, even to the adoption of the new chemical nomenclature, which, we are sorry to say, has not been much taught in American schools as yet. We could wish, also, that the French system of measures had been adopted in this, as in every other scientific treatise, since it is the only philosophical system, which, recently adopted in Germany, we trust will soon be the only one employed in this country; and it is clearly the duty of teachers and writers to take the initiative, losing no opportunity to impress upon students the necessity of early relying upon it and renouncing all others.

The subject of renal diseases seems to us too summarily handled by Dr. Tanner, and we scarcely think it has received, in so large a volume, the proportion of space its importance would seem to demand.

The volume is printed and bound in the handsome style which has deservedly rendered its publishers so distinguished.

A GUIDE TO THE EXAMINATION OF THE URINE. FOR THE PRACTITIONER AND STUDENT. By J. WICKHAM LEGG, M.D., Member of the Royal College of Physicians, etc. Second Edition. Philadelphia, Lindsay & Blakiston, 1870.

This is a useful and convenient hand-book, quite deserving the success which the first edition has met. In one or two instances, however, there is a vagueness about directions given

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for certain tests, which makes it appear as though they were intended to be read by some careless reader, but not followed as guides. This is the case with the method of detecting the bile-acids, represented by Dr. Legg as that of Hoppe. The difficulty was personally experienced in attempting to determine the presence of bile-acids in urine, according to the directions as there laid down. Not only is this the case, however, but Dr. Legg has further erred in attributing this test to Hoppe, whose test is much more complicated, but at the same time more delicate, enabling the smallest quantity to be with certainty detected. The method of Dr. Felix Hoppe was first published in *Virchow's Archiv.*, vol. xiii., and again in *Beale's Archives of Medicine*, vol. i. p. 346, and is correctly given on pp. 234, 235 of the last edition of Beale's Kidney Diseases and Urinary Deposits, and on p. 916 of Aitkin's Practice, vol. ii. It is correctly printed on p. 286 of Hassall's Urine in Health and Disease, except that it is there stated that the acid should be from time to time *removed*, instead of *renewed*. Such errors should not be found in books which are to be placed in the hands of students. There may possibly be a second method by Hoppe, but we are not aware of its existence.

DIE PFLANZEN-STOFFE IN CHEMISCHER, PHYSIOLOGISCHER, PHARMAKOLOGISCHER UND TOXICOLOGISCHER HINSICHT. Erste und Zweite Lieferung. (The Active Principles of Plants in their Chemical, Physiological, Pharmacological, and Toxicological Relations. Parts I. and II.) By DR. AUG. HUSEMANN and DR. THEOD. HUSEMANN. Berlin, 1870.

We commend this book to all interested in the study of pharmacy and the physiological action of the vegetable materia medica. To the advanced student of these matters, its chief interest will lie in the very excellent lists of papers given under the various headings. The authors' knowledge of Continental and British medical literature appears to be very thorough; but their American references are curiously incomplete, and apparently have been taken at second hand. Thus, whilst the paper of Mitchell, Morehouse, and Keen, in the *American Journal of Medical Sciences*, on the relations of opium and belladonna, is referred to without its title being given, no allusion is made to the earlier memoir of Dr. Norris on the same subject, in the same journal, nor is there any notice of the valuable contribution of Dr. Da Costa to our knowledge of the physiological action of narcein. On reviewing the exceedingly slender amount of real original matter which has been, until very lately, contributed by the American medical profession, the ignorance shown by the best Europeans of American medical literature ceases to be a source of wonder; but there is no doubt that the activity manifested here of late years will soon force its results upon their attention. Thus, a knowledge of what has been done in this city alone would, we conceive, cause our authors to entirely rewrite their remarks upon Veratrum viride.

BOOKS AND PAMPHLETS RECEIVED.

A Treatise on Medical Electricity. By J. Althaus, M.D. Second Edition. London, Longmans & Co.; and Philadelphia, Lindsay & Blakiston, 1870. 12mo, pp. 676.

A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M.D., and William Pepper, M.D. Fourth Edition. Philadelphia, Lindsay & Blakiston, 1870. 8vo, pp. 921.

Handbook of Medical Microscopy. By J. G. Richardson, M.D. Philadelphia, J. B. Lippincott & Co., 1870. 12mo, pp. 333.

A Descriptive Catalogue of the New Syd. Soc. Atlas of Skin Diseases. London, 1869. From Lindsay & Blakiston.

The Physician's Visiting List for 1871 (twentieth year). Philadelphia, Lindsay & Blakiston.

IT is stated in many of the journals of the day, medical and secular, that a society has been formed in Paris, the members of which are to bequeath their bodies for dissection, in order to the furtherance of anatomical knowledge.

GLEANINGS FROM OUR EXCHANGES.

PATHOLOGICAL EFFECTS UPON THE BRAIN AND SPINAL CORD IN MEN EXPOSED TO THE ACTION OF A LARGELY INCREASED ATMOSPHERIC PRESSURE. LOUIS BAUER, M.D. (*St. Louis Med. and Surg. Jour.*, vol. vii., N. S., May 10, 1870, p. 234.)—In the course of the construction of a bridge across the Mississippi River, the workmen engaged in laying the piers were exposed, in an "air-chamber," to an atmosphere of two or three times its normal weight. This caused certain disturbances of circulation and respiration. But still more marked symptoms were caused by the rapid transition from this atmosphere to the outside air. These symptoms were hyperæsthesia, with a sensation of numbness, over the lower extremities, with more or less complete paraplegia. This loss of power varied from slight paresis to complete paralysis with loss of reflex action. There were also, in some cases, spasms of the affected muscles, neuralgic pains in the limbs, and a sense of constriction around the trunk. The bladder was usually paralyzed, and the urine soon became alkaline. The hyperæsthesia soon disappeared, and was in some cases followed by complete loss of sensibility. About twenty-five cases occurred; a few recovered within a week; others were under treatment a month before recovery; some still remained palsied at the time of the report; and four died. The autopsies showed marked congestion of the vessels of the cerebral and spinal meninges, subarachnoid œdema, excess of cerebro-spinal fluid, and softening and congestion of both brain and spinal cord. In one case, inflammatory softening of the cord had so far advanced that it was reduced to a pulp for an extent of two inches, corresponding to the lower dorsal vertebræ. Microscopical examination showed numbers of compound granule cells in the softened parts of the spinal cord. The author regards the milder cases as due to spinal congestion; while in the more marked cases the disease advances to inflammatory irritation of the spinal cord and of its membranes.

EFFECTS OF COMPRESSED AIR.—Dr. G. von Liebig (*Medical Press and Circular*, June 30, 1869, p. 549) has recently completed some experiments on this subject, and has thus summed up his conclusions:

1. The number of respirations under the effects of a high pressure, and after the subject has become accustomed to this condition of respiration, do not differ much from those produced under ordinary circumstances.

2. The quantity of air respired does not differ much under the various modes of respiration.

3. The quantity of CO_2 eliminated under the two conditions is nearly identical.

PATHOLOGY OF ADDISON'S DISEASE.—Dr. O. Risel, of Halle (*Deutsch. Arch. Klin. f. Med.*, Bd. vii. Heft 1, Feb. 1870), at the close of a valuable paper of thirty-three pages on this subject, gives the following résumé:

"The results of extirpation, and also the course of numerous cases of disease, of the suprarenal capsules show undoubtedly that in man, provided the disease do not pass beyond the capsules, not only can the capsules be totally destroyed without harm, but also often without any symptoms whatever.

"Addison's disease is dependent on a pathological process—almost invariably tubercular inflammation—in the suprarenal capsules, which occasions disease in the nerves lying about the cœliac artery, viz.: the cœliac plexus and the semilunar ganglion, and probably, also, the superior mesenteric plexus. * * * *

"Diseases of the cœliac plexus are produced independently of disease of the suprarenal capsule, and in connection with disease of other neighboring organs (*e.g.*, pancreas), and probably also spontaneously.

"So far as is known, the disease of the sympathetic depends on an inflammatory increase in the connective tissue surrounding the nerve-fibres and ganglionic cells, and on the changes which follow both in the connective tissue and the nervous elements.

"Since a retrogressive metamorphosis of the inflammatory growth, before the nervous element proper is involved, can

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restore the original condition of things, the possibility of recovery from Addison's disease is quite conceivable.

"The disease of the solar plexus manifests itself especially by paralysis of its vaso-motor fibres, which leads to considerable massing of blood in the abdominal vessels, and to corresponding anæmia elsewhere. This abnormal distribution of the blood produces symptoms which are more or less analogous to those of collapse and the symptoms of anæmia of the nervous centres. The production of the symptoms of cerebral anæmia is assisted by the development of a secondary alteration in the blood,—at present not well understood,—which is very probably the occasion of the bronzed skin."

ADDISON'S DISEASE.—M. Wolff (*Berl. Klin. Wochenschr.*, No. 17, 1869, and *Arch. Gén. de Méd.*, Mai, 1870, p. 604) reports three cases, two of which are accompanied by post-mortem examinations. In the two fatal cases the symptoms characteristic of this singular affection were present; in the third the symptoms were less typical, and there were, in addition, marked muscular rigidity and continuous, though irregular, fever. In one of the fatal cases both suprarenal capsules had undergone caseous degeneration; in the other the left capsule alone was so diseased, the right one being healthy. The ganglia of the abdominal sympathetic were carefully examined in one case. The nerves of the solar plexus, the semilunar ganglia, and the nerve-fibres going to the suprarenal capsules were enveloped in a thick and resisting sheath of connective tissue. Some nerves of the solar plexus presented ovoid enlargements before entering the semilunar ganglia. On microscopic examination, the neurilemma of the nerve-fibres and the connective tissue of the ganglia were hypertrophied, but both the nerve-cells and nerve-fibres were perfectly healthy.

SUPPLEMENTARY SERIES OF AORTIC VALVES.—At a recent meeting of the Pathological Society of London (*Med. Times and Gaz.*, April 2, 1870), Dr. Payne exhibited a specimen of unusual interest. On the left ventricular surface of the septum cordis, about a quarter of an inch under the aortic valves, were three membranous, imperfect valves, one, three-eighths, and one-fourth inch long respectively, two being at the same level, the third under the second. The longest was slightly concave downwards, the other two were horse-shoe shaped. They were continuous with the endocardium, and "precisely resembled valves." At certain points they were adherent to the endocardium.

AMŒBOID MOVEMENT OF PIGMENT CELLS.—Dr. Saviotti, of Turin (*Lancet*, May 28, 1870), has confirmed Cohnheim's remarkable researches by the observation of the reverse process, viz., the entrance of pigment cells into the capillaries. While observing the phenomena of inflammation in the web of the frog's foot, he observed the massing of the pigment cells around the vessels, and finally, after a few hours, their disappearance by penetrating the capillary walls by their amœboid movements.

As complementary to Cohnheim's researches, and in their bearing on the absorption of solid matters, these observations are of the utmost importance.

REPRODUCTION OF THE SPINAL CORD IN THE FROG.—MM. Masius and Van Lair (*Month. Micros. Jour.*, May 1, 1870, p. 236) have recently removed sections of the spinal cord, from one to two millimetres in length, from frogs. Only those experiments were successful which were made during the winter,—that is, from November to the end of February; and little frogs, full of life, were selected, great age seeming to interfere with the results. It was found that at the end of six months the healing was complete, and all the functions had returned in the following order: First the spontaneous fibrillary movements in the thighs, then voluntary movement of the whole of the thigh, extending gradually to the knee and the foot. The perceptive sensibility only appeared more slowly, and sensibility and the power of reflex motion were the last to present themselves. The autopsy and the microscopical examination of the reproduced portion showed that the end of the cord in front of the section was a little swollen, as in the case of nerves that have been divided; the posterior end was rounded, and between the two ends there was a substance, at first gelatinous, in which they found multipolar nerve-cells, and nerve-fibres in the form of Remak's fibres and varicose fibres. The cells appeared before the fibres. They found also, in this gelatinous mass, and in the two ends of the cord, near the point of section, nerve-cells in a state of pigmentary degeneration.

THE MILK OF OPPOSITE BREASTS.—At a meeting of the Académie des Sciences of Paris, a paper was recently read by M. Sourdat on "The Unequal Production and Difference in Composition of the Milk of the two Breasts of the same Woman." These results (reported in the *Archives Générales*, Aug. 1870, p. 242, and the *Med. Times and Gaz.* for August) are as follows: 1. The composition of the milk of the same woman, taking both breasts together, compared day by day, is very variable, without any appreciable change in the state of health. This change may be caused by temporary fatigue, slight alteration of diet, or a retention of milk in the breasts. In eight analyses the weight of the dry residue varied from 10·10 to 13·70 per cent.; the density, from 0·981 to 1·031. 2. The composition of the milk varied in the two breasts, and that at the same time. Thus, that of the right breast, which is more abundant, is also more rich in fixed matters, in the ratio of :: 1·20 : 1 for the minimum to :: 1·74 : 1 for the maximum. 3. Under these conditions the butter is generally secreted in far larger quantities by the right breast than by the left, viz.: :: 1·50 : 1 for a minimum, and :: 9 : 1 for a maximum. The mere appearance of the two milks exhibits this marked difference. 4. The nitrogenized matters, caseine and albumen, are also secreted in larger quantities, :: 1·90 : 1 being the maximum. 5. The soluble principles, sugar of milk and salts, in five analyses, are very nearly alike in the two breasts; and in two analyses in which there was a slight difference, this was found in favor of the side having the least butter.

ON THE INFLUENCE OF ALCOHOL, MORPHIA, CHLOROFORM, AND CHLORAL UPON THE TEMPERATURE OF THE BRAIN. By DR. MENDEL (*Virchow's Archives*, April 16, 1870).—The method of experimentation employed by Dr. M. was to introduce a thermometer into the rectum and fix it there, and a second within the skull through an opening made by a trephine, so as to allow comparisons to be made between the two. The results attained are as follows:

Chloroform.—1. It depresses the general temperature of the body, but more distinctly in cats than in dogs.

2. This depression is often preceded by an increase in the temperature, which is almost certainly owing to the struggles of the animal.

3. This depression is much more marked in the temperature of the head, so that the difference between the two thermometers is greatly increased.

4. In those cases in which the chloroform failed to narcotize, no such increase of the difference between the two instruments occurred.

Chloral.—With this the general fall of temperature was not so marked and positive as with chloroform, but there was the same relatively greater depression of the cephalic temperature, and consequent increase in the difference of the two thermometers.

Morphia.—Large doses of morphia, given hypodermically, depressed very distinctly the general, and much more so the cephalic, temperature, precisely as the other agents.

Alcohol.—This drug was given, by the mouth or hypodermically, in sufficient quantities to induce evident drunkenness. A diminution of the general temperature was induced, but the cephalic temperature relatively to that of the body was increased, so that the difference between them was lessened, and not unfrequently the cephalic temperature became the greater of the two.

Dr. M. believes this comparative, and often actual, increase of brain-temperature is due partly to a paralysis of the cephalic sympathetic, and partly to a stimulation of tissue-change in the nerve-centres by the alcohol. In the case of the other substances used, he thinks the reverse occurs.

CONIUM MACULATUM.—In a paper in the *Boston Med. and Surg. Journal* of June 30, 1870, Dr. Leonard Wheeler states

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that he has found Squibb's fluid extract, Succus conii, *Br. Ph.*, and Conia the only at all reliable preparations of this drug. The first of these is made from unripe seeds by the process of repercolation without heat, and therefore ought to be efficient. One drachm of it scarcely equals in effect two-thirds of a minim of the alkaloid. He corroborates the well-known fact that all of our officinal preparations vie with one another in worthlessness. The author has found that when hypodermic injections of conia are given to a frog, placed on a frog plate under the microscope, the circulation of the web of the foot is first slowed and then arrested, but that the calibre of the vessels is unaffected. He corroborates the axiom of Harley that hemlock must be given in such doses as will develop unmistakably its peculiar physiological effects if good is to be produced by it.

Raw Meat in the Diarrhœa of Children.—Dr. Robert Druitt (*Med. Times and Gaz.*, July 2, 1870) highly recommends this practice of Trousseau. A tidbit of the loin of mutton or of the fillet of beef is submitted to a process of scraping and pounding, so as to get out all the red, soft muscular substance as free as possible from all fat and fibre. The muscular substance so prepared forms a soft pink pulp, giving no feeling of resistance when squeezed between the fingers. A good-sized piece of meat will yield very little of this pulp by comparison with the parts that are rejected. Young infants suck it greedily from the ends of the nurse's fingers; but older children, from two to five years old, will require it to be dusted with sugar. In the dyspepsia, atrophy, and malnutrition of children and of adults, and in the vomiting of pregnancy, it is excellent. To adults this meat pulp should be administered suspended in strong beef-tea, or it may be diffused in stiff meat jelly.

Excision of the Knee-Joint. By M. Pénières (*Archives Générales de Médecine*, Mai, 1870).—In his inaugural thesis, M. Pénières has collected 431 cases of excision of the knee-joint for white swelling, of which, including those subjected to subsequent amputation and re-excision, 131 were fatal. Of the 300 recoveries, 47 underwent consecutive amputation and 6 re-excision; while of the 247 recoveries in which no subsequent operation was required the result is noted as very good in 166, and as bad in 27. Of the entire number of cases,—431,—subsequent amputation was performed in 61, with 14 deaths, and re-excision in 10, with 4 deaths.

The results of the operation relatively to the age of the patient were as follows:

	No.	Cures.	Deaths.	Percentage.
From 1 to 5 years,	18	11	7	38·8
" 5 " 10 "	84	71	13	15·4
" 10 " 15 "	74	60	14	18·9
" 15 " 20 "	61	41	20	32·7
" 20 " 25 "	56	36	20	35·7
" 25 " 30 "	58	39	19	37·2
" 30 " 40 "	42	23	19	45·2
Above 40 years,	17	9	8	47·

The cause of death is specified in 89 instances, from which it would appear to have been due to pyæmia in 33, phthisis in 12, exhaustion in 17, hemorrhage in 13, meningitis in 3, phlebitis in 3, osteomyelitis in 1, shock in 1, and visceral complications in 6.

In regard to the operation itself, the author agrees with Mr. Butcher and Mr. Price on the advantages to be derived from the ablation of the patella, since it not only abridges the duration of treatment, but diminishes the risk of a fatal issue by nearly one-third, while its retention more than doubles the chances of secondary amputation. M. Pénières terminates his thesis by advising resection in preference to amputation for white swelling of the knee between the ages of 5 and 35 years, provided there be no complications, when the lesions are limited to the articular extremities of the bones, and when the disease is of comparatively recent standing.

Induction of Labor in a Case of Deformed Pelvis. (*London Lancet*, June 18, 1870.)—A woman with a deformed pelvis, measuring only two and a half inches in the conjugate diameter, had lost six children in the birth, either through craniotomy or by the too early induction of premature labor. In the following pregnancy, Dr. Poole induced labor in the middle of the seventh month, by introducing into the womb two-thirds of a flexible gum catheter, and by dilating the os, next day, with Barnes' dilators. The right knee presented, which was leisurely guided downwards until the umbilicus reached the vulva. Two assistants now pressed forcibly on the vertex, through the abdominal wall, whilst the doctor, at the same time, pulled on the legs. The cervix uteri descended with the head to the vulva, thus diminishing, by its thickness, the antero-posterior diameter to two and a quarter inches. Yet the child was rapidly delivered, and breathed and cried freely, after half an hour's assiduous attention.

Transfusion in the Asphyxia of a New-born Child.—Dr. De Belina (*Gazette Médicale*, No. 2, 1870) gives the details, as follows: A Russian lady, in the eighth month of pregnancy, was roughly shaken by a railroad accident. Labor setting in, she was conducted to the nearest hotel, and Dr. B. called in. Strong pains soon came on, and the head was born, with the neck surrounded by two turns of the cord. Finding it impossible to slip the cord off, he hastened to terminate labor by cutting it. Unfortunately, the shoulders were delayed so long that the child was born blue and asphyxiated, with very feeble heart-beats. For ten minutes he resorted to all the ordinary methods for restoring the child, but the pulsations grew feebler and feebler, and he resolved to try transfusion. Taking the blood flowing away from the placenta, he defibrinated it by whipping it with a whalebone stick, and injected about an ounce into the umbilical vein by means of a small glass syringe. The child shuddered, drew a long breath, commenced to respire regularly, and is now nearly a year old.

Muscular Power of the Uterus in Parturition.—Prof. Haughton (*Med. Press and Circular*) shows that the expulsive force of the uterus required in dilating the os in the first stage of labor is equal to 3·4 pounds on the square inch. This conclusion is very similar to the one of Dr. Matthews Duncan, who proved by experiments that a force of 3·1 pounds on the square inch was necessary for the rupture of the membranes. When, however, the natural expulsive power of the uterus is aided by the voluntary efforts of the woman, the force thus obtained is enormously augmented, being equal to 42 pounds on the square inch, which would represent a force of 593 pounds exerted upon the child to extrude it.

Treatment of Croup.—In an exceedingly interesting letter to Prof. A. Jacobi, Prof. Fordyce Barker (*American Journal of Obstetrics*, May, 1870) makes this remarkable statement: that "no burial certificate of mine can be found of death from croup in the mortuary records of the Health Board of this city" (New York); and attributes this success to the promptness and method of his treatment. Immediately upon the outbreak of croupy symptoms, his patients are instructed—before sending for him—to give at once an emetic of turpeth mineral (hydrargyri sulphas flava) in doses of three to five grains, to be repeated in fifteen minutes if it does not act. If, upon his arrival, he finds evidences simply of catarrhal laryngitis, he relies on opiates, such as Tully's or Dover's powder, or the Brown Mixture of the U. S. Disp. If, however, there are fever, hot skin, ringing cough, and hurried breathing without thoracic râles, he gives the tinct. Verat. virid. every two hours in one- or two-drop doses. Should these symptoms grow worse, indicating that the disease is extending downwards, he combines two grains of the carbonate of ammonia with each dose of the Verat. virid., and occasionally repeats, on the second or third day, the emetic of turpeth mineral, if the laryngeal or tracheal obstruction increases. In advanced stages, when the respiration is hurried and irregular, the paroxysms of cough less marked, the intermissions less distinct, and the cough husky instead of ringing, he gives *large* doses of quinine, as in the following mixture:

℞. Mist. acaciæ,
Syrp. senegæ, āā ℥j.
Quiniæ sulph.,
Ammoniæ carb., āā ℥ss.

M. S. To be well shaken. A teaspoonful every fourth hour.

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MISCELLANY.

A HARD CASE.—For many years the seamen of our merchant marine have been taxed twenty cents per month each, as hospital money,—the understanding being that such payment entitled them, when sick, to medical treatment in hospital, to be settled for by the collector of the port or his agent, at certain specified rates. Most of the men, as is well known, are without homes except in boarding-houses; and they are especially apt to become the subjects of venereal disease. By a recent order, however, cases of this class are excluded from the benefits of the hospital fund, and so are all other cases, except those of disease or injury contracted or sustained while the patients were actually on a ship's books. A man may be a seaman for twenty or thirty years, paying his hospital money all that time; but if, the day after he is paid off for his last cruise, he breaks his leg, he is considered to have no claim upon the collector of the port. If he goes to a hospital, it is as a charity patient. Should he contract venereal disease, he must either pay his own way afresh, or become palpably a pauper by entering the wards of an almshouse. So far as any benefit to himself is concerned, he might as well have dropped his hospital money over the ship's side. There may be another side to the question, but it seems to us that the seamen have just grounds for complaint.

A PECULIAR PEOPLE.—There is a sect, the chief seat of which appears to be in the county of Essex, in England, who believe that they ought not to interfere in cases of sickness, except by prayer and other religious services. Several times persons holding this view have been brought before courts, charged with causing the death of their children by neglecting to provide them with proper medical attendance. A similar idea has, we believe, prevailed at various times among small bodies of religionists. What decision, if any, was arrived at in the courts in the cases referred to, we are not informed.

NEW YORK TUMOR DISPENSARY.—We learn that on the 1st of September, 1870, an incorporated and chartered institution bearing the above title was opened in New York city. It is situated at No. 37 West Thirtieth Street, and will be conducted by the following gentlemen: Attending Surgeon, Dr. J. Albert Hagy; Consulting Surgeons, Drs. T. Addis Emmet and J. C. Nott. We are not informed of any of the details of its organization, but understand that it has a number of wealthy and influential supporters.

IT is very much to be hoped that the really brilliant success of the conversazione given in May last at the hall of the College of Physicians, in this city, under the auspices of the Biological and Microscopical Section of the Academy of Natural Sciences, may be followed up by similar entertainments during the coming season. The advantage of thus bringing together, as guests of the cultivators of physical science, a large number of the intelligent and highly educated members of the community, can scarcely be overestimated.

COMPULSORY VACCINATION.—The prejudice against vaccination would seem to be much deeper and more general in England than in this country; or perhaps it is brought into readier notice by the more stringent efforts made by the authorities to compel the adoption of that safeguard. Cases are mentioned in the journals, secular as well as medical, in which parents have submitted to repeated fines for neglecting the vaccination of their children, and have avowed their determination to resist to the very last. The slight basis upon which the prejudice rests may be easily seen from the vast number of vaccinations performed, and yet the exceedingly small number of instances in which there is any show of evidence that other diseases have been communicated through this channel.

MUTTER LECTURESHIP.—No appointment has as yet been made by the College of Physicians to fill the vacancy left by the resignation of Dr. Brinton. It would be a great pity if this plan of developing medical science, which has been so richly productive abroad, and especially in England, should fail here; and yet fail it must, unless men of ability are found to lecture, and appreciative audiences are ready to listen to them.

MODERN SURGERY.—An illustration of the advance in surgery made in the present century may be found in the fact that the operator who first successfully tied the internal iliac artery for aneurism, Dr. Stevens, died only two years ago. Dr. S., who then lived in the West Indies, was only twenty-six years of age, in 1812, when he achieved this feat. Nine other operations of the kind, performed since, are upon record, with four successes, so that the proportion of deaths is only fifty per cent.,—a singularly favorable showing for so grave a procedure.

APPOINTMENT.—Dr. Harrison Allen has been elected one of the attending surgeons to the Philadelphia Hospital at Blockley, to fill the vacancy caused by the resignation of Dr. R. J. Levis.

MAIMED PENSIONERS.—The books of the U. S. Pension Office show that of the soldiers drawing pensions, 5006 have lost one arm, 4627 one leg, 350 both arms, 42 both legs, and 21 an arm and a leg.

"THE PHOTOGRAPHIC REVIEW OF MEDICINE AND SURGERY."—We have received a prospectus of this new periodical, which will be issued every alternate month by Messrs. J. B. Lippincott & Co., under the editorship of Drs. F. F. Maury and L. A. Duhring. Each number will contain four photographic representations of disease, with letter-press notes of the cases. Some of the ablest members of the profession in this city have promised their support to the enterprise, which we trust will prove a success. The editors will select, from the cases sent to them, those best suited to this mode of illustration. The first number will be issued in the course of a few days.

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending				
	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Oct. 1.
Diseases of the Brain and Nervous System	50	45	29	46	49
Diseases of the Organs of Circulation and Respiration	70	61	76	70	70
Diseases of the Abdominal Organs	103	93	81	79	59
Zymotic Diseases	25	13	31	19	18
Constitutional Diseases	43	45	36	24	31
Casualties	16	7	16	10	12
Stillborn	21	11	7	13	18
Unclassified	7	3	1	3	12
Unknown	0	3	2	1	1
Adults	131	132	143	127	129
Minors	204	149	136	138	151
Totals	335	281	279	265	270

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THE MEDICAL TIMES.

TUESDAY, NOVEMBER 1, 1870.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON HYDROPHOBIA.

BY J. FORSYTH MEIGS, M.D.,
Physician to the Pennsylvania Hospital.

Delivered Saturday, September 11, 1869.

GENTLEMEN:—Since our meeting last Wednesday we have had brought into the wards a case of that happily rare, but terrible, disease called hydrophobia or rabies. I will read you the notes of the case, as they were drawn up by my clinical assistant, Dr. George Pepper, and then make such remarks upon the disease and its treatment as shall seem to be proper.

Con Dougherty, admitted Thursday, September 9, 1869, at 5 P.M. Irish, single, æt. 28, laborer. Has been in America for some time; has always enjoyed excellent health.

On the 10th of February last he was bitten in the thumb by a small dog; which thumb was injured is not known. The dog was a small, mangy cur which was accustomed to live off the garbage in the streets. It was a cross, snappish brute, and had frequently bitten those interfering with it. It snapped at a child soon after biting Dougherty, and was shot the same afternoon by a policeman. The wound inflicted was quite deep, bled freely, and the hand was carried in a sling for several days after. The only treatment was a little whiskey poured over the hand. More attention would probably have been paid to the injury had not two boarders in the same house been brought home at about the same time, injured by a factory explosion. The wound healed up perfectly, and left no scar that can now be detected. Has been feeling slightly out of health for the past month, for the first time in his life. Slight loss of appetite, and constipation.

On Tuesday, September 7, had a marked chill in the morning, and felt chilly and languid throughout the remainder of the day, and did not go to work. Was awakened the next night, about midnight, by a sense of burning thirst, and on going to the hydrant, in the yard, and taking the spout in his mouth, was seized with a violent spasm, accompanied by wild excitement.

From this time until admission the symptoms were as follows: very slight heat of the skin; pulse about 60, with a peculiar deliberate, hesitating beat; manner excited and unnatural; expression of eyes somewhat wild; voice natural; uses many grimaces in speaking; entire sleeplessness; constant intense thirst; tongue moist, and coated with a thick yellowish-white fur; bowels quiet; was able to eat solid food, as bread, or even if it contained much fluid, as watermelon; almost unable to drink any fluid,—this was particularly true of cold water; he seemed better able to take hot liquids; contact of fluid with the inside of the mouth, even before any effort at swallowing was made, brought on violent spasms of the pharyngeal and cervical muscles, with rigidity of the entire body; these spasms lasted but the fraction of a minute (thirty seconds, at most), were attended by lividity of face, and subsided instantly, with relaxation and a sense of exhaustion; if his fingers were dipped into cold water, or a brush or cloth wet with water was placed on the face, as in shaving, or any substance brushed over the face, as in taking off the shirt, or even a puff of air directed against the face, as by fanning, similar though less severe spasms were caused. On the 8th he took four purgative pills, which did not operate.

On admission, he was in much the same condition as above described,—rational, but with a wild, excited manner. Ordered one-half grain of extract of calabar bean, by the stomach, every three hours. Injections of beef-tea and water, which did not remain. Had a hypodermic injection of one-third grain of sulphate of morphia in back of neck at about 10 P.M. Took four doses of the extract of calabar bean.

September 10. Had a quiet night, but slept none, and this morning seemed in much the same condition as yesterday. At about 10 A.M. he was seized with wild, maniacal delirium,—staggering up and down his cell, tearing the bed-clothing, breaking everything near him, striking at everything and everybody with a large brass enema-pipe which he had seized; he was constantly spitting large amounts of frothy saliva over everything near him,—this was apparently automatic, and only to clear the mouth and fauces of the viscid secretion; constantly jabbering and grimacing; his attitude was peculiar,—the shoulders elevated, and the head depressed on chest; no stridulous respiration.

He was strapped to the bed, after a time, and was then found to be insensible; face turgid, livid; eyes deeply injected and turned up; pupils widely dilated; convulsions ceased; pulse 135 or 140, of fair volume; respirations deep, quite regular; heart's action rapid, sounds distinct; body rigid; recti rigid; extremities cool and livid; body only slightly warm, and sweating.

He was etherized, and became perfectly quiet; then one part of chloroform to five parts of ether was substituted, and used whenever he became at all excited, until 1½ P.M., when the anæsthetic was finally abandoned. Hypodermic injections of one-third grain of extract of calabar bean were given at 2, 4, 6, 8, and 10 P.M. He had enemata of beef-tea and water, which, however, were not retained. Was quite quiet during the afternoon, still strapped down; muscles more or less rigid; pulse about 120, feeble; respirations quiet.

At 5½ P.M., he was quiet, perfectly rational; face pale; eyes injected; pupils rather contracted; extremities cool and livid; finger-tips macerated; pulse 120, feeble, irregular; his left arm was liberated from the glove, and he ate several pieces of bread soaked in milk, without any difficulty, but refused absolutely to attempt to drink any fluid, stating that he was afraid to try. On testing the muscular contraction, the flexion of the arm was found to be very feeble; the rigidity of the recti abdominales much less evident, the belly being more supple.

At 12 P.M., when he was to have his hypodermic injection of calabar bean, he was found relaxed, sweating freely, vomiting, and passing large quantities of wind from the bowel; the surface was more or less livid; pulse hesitating, feeble, about 120; respiration quiet and free. The injection was withheld until 3½ A.M.

He was perfectly quiet through the night, though he had occasional slight spasms if air blew directly on the surface or he heard the splashing of fluids; he ate some bread steeped in milk, and a small piece of chicken, but would touch no fluids.

At 3½ A.M., when he had his last hypodermic injection, he was perfectly calm and rational, but was evidently weaker; the vomiting and sweating had entirely ceased, and he seemed very comfortable.

From this time he gradually sank, and died quietly, of asthenia, at 9·40 A.M., Saturday, September 11, 1869.

Now, gentlemen, you have heard the details of the case as it unfolded itself before us. The disease has been divided, by some writers, into two stages: the first, or prodromic stage, during which the patient is simply depressed in spirits, seeking solitude, or moving about restlessly and yet avoiding company. He complains of a feeling of dread and impending trouble, sighs deeply, is unable to sleep, and has already a sense of respiratory distress, which is soon to increase and run into the dreadful gasping and convulsive movements of the breathing apparatus which constitute one of the most marked symptoms of the fully-developed disease. This is called the *stadium melancholium*. After a few days—two or three, generally—this passes into the second stage, which has been called the *stadium convulsivum, hydrophobicum*, or *furibundum*. Our patient was brought to the hospital just at the close of the first stage, so that we had no opportunity of seeing the exact symptoms of that stage. On the morning of the 10th of the month, and less than a day after his admission,

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the second stage had developed in all its terrible force. When I reached the house, at eleven o'clock that day, he had been for one hour in a most violent paroxysm of delirium. I saw in this hospital, in the years 1838 and 1839, before the insane patients had been removed to the new hospital over the river, many violent cases of acute mania; and since then, in private practice and in this house, among the delirium tremens cases, I have had to look upon many painful scenes; but never have I gazed upon a more frightful exhibition of insane violence than the one I saw here in the person of that poor fellow. For one hour he had been alone in his cell, with the bed-furniture all tossed about the room, himself armed with a large metallic syringe, roaming about from the bed to the floor, from the floor to the table, and back from the table to the bed, with a trembling, uncertain, stooping gait, his face distorted, his mouth constantly spitting a most abundant frothy and viscid saliva over himself and all the articles about him, his eyes haggard, without expression, except one of dreamy horror, sometimes staggering, sometimes falling, and exhibiting one of the most pitiable and appalling sights I have ever seen. Such was his appearance that none of the attendants had been willing to go into his room. I procured a small mattress, and, taking one of the assistants with me, had the door opened, and, holding the mattress before us, so that he might not, in his delirium, strike us, advanced directly upon him. He made no attempt to injure us, but as soon as I grasped one of his arms, and the assistant the other, he said, in distinct tones, "I won't hurt you, I don't want to hurt you," and yielded to us with very moderate resistance. The mattress was laid upon the bedstead; we placed him on his back upon it, and secured him with the straps used for the delirium tremens patients when we find them exhausting themselves dangerously by incessant movement. I then etherized him at once, and he very soon became still, and we had no more difficulty in carrying out the treatment that was necessary. The horror his appearance had inspired will be made more intelligible to you when I tell you that his own brother was afraid to sit by his side to administer the ether on the sponge, dreading infection from the constant stream of saliva which he kept puffing from his mouth.

Knowing that ether and chloroform and all the narcotics had been repeatedly tried in vain in these cases, I determined to continue the calabar bean, the Physostigma venenosum, which has been found, in the last few years, so useful in tetanus.

During the first night of his stay in the hospital (that of the 9th) he had had four doses of half a grain of the extract, given by the mouth, and yet the next day at ten the violent maniacal attack had come on. After he had been secured upon the bed and etherized, I found that the muscles of the body and those of the neck were very rigid. The abdominal walls were as hard as board. It was thought best to use the remedy by the hypodermic method. It was administered in this way, therefore, in doses of a third of a grain, at 2, 4, 6, 8, and 10 P.M. At 5½ P.M. he was very quiet, and he was partially released from the straps. At midnight his muscles were found to be much relaxed, he had been vomiting, flatus was passing freely from the bowels, he was less livid, the respiration was quiet and easy, and the pulse was feeble and hesitating, and about 120 per minute. Under these conditions, it was thought safest not to use the extract, and no more was given until 3½ A.M. of the 11th. At that hour he was perfectly calm and rational, the vomiting and sweating had ceased, and one more injection was used. From this time he gradually sank, and died quietly at 9·40 in the morning.

I confess that at one time I began to hope that this new remedy might be about to achieve a great medical triumph for us,—to cure an undoubted case of hydrophobia; but it was not to be, and this terrible and probably invariably fatal disease had added yet another victim to its list. Nevertheless, gentlemen, it seems to me that the quiet and ease which this poor fellow experienced during the last sixteen hours of his life were owing to the action of the bean upon his nervous system. It had done for him what it has done for a considerable number of cases of tetanus,—it had unlocked the rigid contraction of the voluntary muscles; and we may hope that in some future case a more exact knowledge of the precisely accurate method of using this powerful and wonderful agent may yet enable us to master this most intractable and fatal disease.

Hydrophobia is caused in man, so far as we know, only in one way,—by the introduction into the body of a specific animal poison formed in the saliva of certain animals. The mode of transmission is nearly always by a bite from the affected animal. The saliva applied upon an abraded surface in any other mode will, however, sometimes produce the same result; though nearly all the cases on record have been caused by a bite. Drs. John and Arthur Gamgee, of London, very high authorities on the point, state, without hesitation, their belief that the poison arises in dogs and other animals only by inoculation from other animals.

The dog is the animal who most frequently inflicts the disease upon man. Wolves and foxes are liable to it also, and the former have quite frequently given it to man. Besides these animals, martens, badgers, and pigs are known to be liable to it, as are also, though more rarely, horses, oxen, sheep, deer, and other herbivorous animals.

The frequency of the disease is variable in different years. Mr. Wm. Youatt stated, in evidence before a committee of the House of Commons in 1830, that he had applied lunar caustic to about four hundred people who had been bitten, and yet Drs. John and Arthur Gamgee say that, though more or less connected with veterinary colleges in England since 1849, not a single case of rabies has come under their observation at home, while many instances were seen by them abroad (on the Continent) on almost every occasion when they visited foreign schools. When in Lyons and Paris, in 1854, many were the cases they saw; and often they met ladies unconsciously carrying their rabid pets to be visited by the professors. I myself saw a case in this hospital, in a man, when I was a student of medicine, and two (including the present one) since I have been one of the physicians to the hospital. I have been twice called in the night to see cases in my private practice. One of these occurred in the country, about three miles from town, in a child ten years old. It had died a short time before I reached the house. The other case occurred in a young man on Thirteenth Street; he also had died before I arrived. This makes five cases that I know of in my own experience. The disease is, therefore, not so very rare in this city.

The period of incubation in man is very variable. Usually it is between four and eight weeks; but it has been known to occur as early as eight days after the bite, and to be as long as eight or nine months, and in one very remarkable case it seems to have broken out seven years after the bite.

The diagnosis of the disease is not, it seems to me, difficult. The only affections with which it would be at all likely to be confounded are hysteria, acute mania, and tetanus. I can only say that I never saw hysteria even slightly resemble it. I had one patient, a nervous, timorous woman, who always had some slight difficulty in swallowing water, when her health was disordered; but in not one of several attacks in which she had this symptom was there any resemblance to true rabies.

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Acute mania is sometimes attended with frequent expuition of saliva, but the other symptoms do not resemble those of rabies, and the expuition of saliva has not the violence and constancy of the effort to be seen in rabies, nor is the saliva so viscid or so abundant. I have never seen a case of mania which at all impressed me as has rabies. Tetanus, when the pharyngeal muscles are spasmodically closed, may present some resemblance to rabies, but its supervention on injuries, the fact that the spasms are not intermitting, that trismus usually exists, the absence of the distressing thirst of rabies, and of the copious expuition of saliva, and the rare occurrence of delirium in tetanus, will generally remove all difficulty in the differential diagnosis. Trousseau gives two curious cases of what he calls mental hydrophobia, occurring in men who supposed they had been inoculated by rabid dogs. One stated that a dog, who was proved to be mad by having imparted the disease to other dogs which he had bitten, tried to bite him. This gentleman, some months after this event, suddenly, after eating a very hearty breakfast, exclaimed that he was seized with hydrophobia. He could not eat or drink, and was beginning to rave, when his wife, who only believed that he had eaten too much, persuaded him to tickle his throat with his fingers. Copious sickness soon came on, and the supposed rabies was gone. Another gentleman, a judge, had a favorite dog, which, in his rides, often jumped to kiss the hand which held the whip. After one of these rides the dog became mad, bit several sheep and dogs, and soon died. Shortly after this the judge learned that several of the dogs that had been bitten had died of rabies. He became alarmed on reflecting that the dog had licked his hand several times, and, finding the traces of several small scars on his hand, fancied he had been poisoned, and, believing that he had hydrophobia, was afraid to touch water. A medical man was called in, and he was for several days excited and delirious. Being told that persons seized with rabies died in a very few days, and that his dread of water, which had lasted ten days, could be only the fruit of imagination, he finally became convinced of the true nature of his case: the dread of water vanished when he became convinced that he would have died several days before had he had a true hydrophobia. These cases are instructive, and may, some of these days, be of service to you in practice, should you happen to be called to such.

The best writers on this disease state that it has never been cured, and that the only good the physician can do is to comfort the patient by such means as allay the suffering inevitable in the disorder. In the case which has just been described to you, the use of the ether and chloroform inhalation very soon removed the delirium and the general distress of the patient. The extract of the physostigma certainly seemed to remove the convulsive and tetanoid spasms of the patient, and, though he could not swallow fluids, he was able to take small quantities of bread softened in milk, and was very calm and easy.

But, whilst we cannot cure the disease when it once sets in, there is no reasonable doubt that it may be prevented by a proper treatment of the wound at the time of the bite. This preventive treatment consists simply in the use of means intended to prevent the absorption of the poison from the wound. This end is secured by any means which shall destroy the tissues at the point bitten. If possible, the edges of the wound may be excised; but, whether this is done or not, the tissues at the seat of the bite must be destroyed by the use of the actual cautery or some escharotic. Youatt, the great English writer on the disease, a man who had a very large experience in this matter, always used the solid lunar caustic. A piece of this salt should be rubbed thoroughly over the whole of the wound, great care being taken that it reaches every portion of the wound. I have myself applied it in several cases, and I always bring it first to a sharp point, pass it slowly along the edges, and push it into the deepest parts of the wound two or three times, holding it for several seconds in contact with all the parts of the lacerated tissues, until I feel sure that they are thoroughly blackened and cauterized. I saw, several years ago, a young gentleman, in this city, who had been bitten deeply in three places on the forefinger by a young terrier dog who was undoubtedly mad. I treated the wound carefully in this way, and he never had any trouble from the accident.

You should be acquainted with the signs of rabies in the dog, in order that you may know when there is a necessity for resorting to these means; but, as you will find them detailed in various works on medicine, I will not detain you by an enumeration of the symptoms. I will merely say that when there is the slightest doubt about the fact of a dog who has bitten one of your patients being hydrophobic, you should never hesitate to use the caustic or the actual cautery.

The results of the post-mortem examination I will give you at some future time, after they have been properly elaborated.

(To be concluded.)

ORIGINAL COMMUNICATIONS.

RETENTION OF URINE FROM IMPASSABLE STRICTURE.

RELIEVED BY OPENING THE URETHRA BEHIND THE STRICTURE; WITH SOME REMARKS UPON THE OPERATION AND THE PROPRIETY OF PRACTISING IT IN PREFERENCE TO PUNCTURE OF THE BLADDER.

Being the substance of a Clinical Lecture delivered at the Jefferson Medical College, May 4, 1870.

BY S. W. GROSS, M.D.,
Lecturer on the Diseases of the Genito-Urinary Organs.

RETENTION of urine is a complication of urethral stricture not unfrequently met with; but, fortunately, the vast majority of such cases yield to chloroform and the proper use of the catheter or the conical steel sound. When a man is suffering from a distended bladder dependent upon a firm, tight stricture, the young practitioner must be careful not to be cajoled into the idea that if a small metallic or flexible instrument cannot be passed, or even entered, the urine must of necessity be evacuated by tapping the bladder. Let him rid himself at once of overcautious timidity in introducing metallic instruments. Let him forget the teachings and writings of certain contemporaneous surgeons, who have instilled into his mind that anything like force is to be avoided, and who have done incalculable harm by surrounding the subject with mysterious difficulties and dangers which do not exist. On the contrary, when the life of his patient is at stake, he must repose firm faith in his catheter and act with decision. Taking a medium-sized instrument, the point of which should correspond with the narrowness of the stricture, and should never be less than No. 1, English gauge, for fear of perforating the canal, and carrying it down to the seat of the obstruction, the penis at the same time being put upon the stretch, by making slow, firm, steady, and long-continued pressure, he will succeed, nine times in ten, in overcoming the so-called impermeable stricture and in affording relief. Should the obstruction be so obstinate as to defy this means, or should the urethra be lacerated and a false route be commenced, forcible attempts must, of course, be at once abandoned and other measures resorted to. Let

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me not be misunderstood: I do not advise rudely driving an instrument onward into the bladder in spite of every obstacle; for, although it may be readily done, and be followed by immediate relief, the worst consequences would be liable to ensue. But I do mean to say that if teachers would talk less of the dangers of using "force,"—which is merely a relative term, and conveys to the inexperienced mind any or all procedures which draw blood from the urethra,—and would drop the expression altogether, and teach their classes to rely upon a silver or steel instrument, instead of wasting time and poking about with small flexible ones, and direct that such an instrument be used with gentleness, albeit with firmness and decision, such authorities would send forth better practitioners, avoid useless operations, and spare lives.

Instances of complete retention from tight, chronic stricture do, however, occasionally occur, which defy all attempts to pass a catheter, even in the hands of the most expert surgeon; and in such cases success is rendered impossible, either from neglect on the part of the patient or from previous improper treatment. Immediate relief is demanded from the urgency of the local and constitutional distress. There is danger of the urethra giving way behind the obstruction, particularly when it is of very long standing; or extravasation of urine may have actually begun. In such an emergency the attendant must be equal to the occasion. There is no time for deliberation. An artificial passage must be secured to the urine, either by opening the urethra from without, or by puncture of the bladder, according to the circumstances of each particular case.

When the retention is due to impassable stricture of the perineal urethra, or that portion of the canal seated behind the scrotum, the only operation that should be performed is that of dividing the stricture, either from before backwards upon the point of a catheter, as in the old and difficult perineal section, properly so called, or of laying open the urethra behind the contraction, with subsequent division or not of the latter, as the operator may see fit. In either event, a free outlet is at once afforded to the pent-up urine, and the cure of the stricture is begun.

When, on the other hand, the retention is due to impassable stricture of that portion of the urethra covered by the scrotum, or the portion in front of the scrotum, incisions practised from without are not proper, owing to the liability to urinary infiltration in the former case, and to the difficulty of closing the wound when the penile urethra is opened. Internal urethrotomy with a lanceted stylet protruded from a canula, as in Physick's or Stafford's instruments, may be resorted to; but the uncertainty and hazard of using such contrivances without a guide are too well known to be dwelt upon here. What, then, should be the line of conduct in such an emergency? Ordinarily, vesical puncture, most often by the rectum, has been the rule. Rather, however, than puncture the stricture or the bladder by any of the usual routes, I should myself prefer to open the membranous urethra; and this I should do with three objects in view: first, to empty the bladder; secondly, by diverting the urine through a new channel, to give the urethra, at the seat of the obstruction, time to recover from the irritation and pressure of the urine to which it had been long subjected, and thereby facilitate its future treatment; and thirdly, to place the prostate gland and the bladder at rest, whereby they would be enabled to recover from the effects of the constant and laborious work in which they had been long engaged.

The subjoined case of retention of urine from impassable stricture of the scrotal urethra will illustrate what, in my judgment, is the proper course to be pursued in all similar instances:

On Wednesday, the 4th of May, I was called to G. P., a butcher, aged 36 years, of temperate habits and good general health, whom I found walking up and down his room in great distress, his heart and brain being much excited, while his hypogastrium was tumid, tender, and painful. Fifteen years previously he contracted a gonorrhœa, which was of a severe nature, being attended with frequent chordee and hemorrhage, and one year subsequently he first noticed signs of obstruction. For the past eighteen months the stream of urine was not larger than an ordinary knitting-needle, and at times it was even smaller, or trickled away by drops, and the act of micturition required at least ten minutes, or longer when the call was not at once attended to. He had never undergone treatment, nor was he aware of the precise nature of his trouble.

On the previous Monday morning, at four o'clock, he did not succeed entirely in emptying his bladder, the urine issuing at first in a slender stream and afterwards by drops. Throughout the succeeding twenty-four hours the calls to micturate were frequent, and the act was much prolonged and performed guttatim. This state of affairs continued until early on Tuesday evening, when complete retention set in, depriving him of rest and sleep during the entire night, on account of severe suffering and vesical tenesmus, which obliged him to pass the interval between ten o'clock and daylight on his *pot de chambre*, in fruitless and forcible efforts to obtain relief. When I saw him, at eleven o'clock on the following morning, the bladder formed a tense and tender tumor, which extended two-thirds of the way to the umbilicus; he experienced pain above the pubes and in the back and loins; straining was constant and very distressing; the pulse was excited, and the skin hot. Exploration showed a stricture near the meatus, which having been divided with a probe-pointed bistoury, a No. 8 English gauge silver catheter was inserted, but it was arrested just in front of the peno-scrotal junction, where a stricture could be detected by external manipulation, which imparted to the touch the sensation of a dense ligamentous cord.

Being alone and without the necessary appliances, I had the patient removed temporarily to the college hospital, where he was put to bed. Chloroform having been administered, and oil injected into the passage, slow, steady, continuous pressure was made against the face of the obstruction, first by the catheter, and then by conical steel sounds, the point of the smallest of which was rather less than No. 1, English gauge, the penis at the same time being put upon the stretch. Failing in effecting penetration, these instruments were laid aside, and elastic catheters and bougies, descending in size to No. 3, French gauge, the diameter of which is about the one twenty-sixth of an inch, were substituted. Patient efforts to insert any of these into the stricture were also fruitless, when I selected a whalebone filiform guide, the probe-point of which measured one-fifth of a millimetre in diameter, with the view of testing the retention catheter of Professor Gouley.* This little instrument passed, apparently, through the obstruction into the bladder, but it was impossible to carry the catheter over it and others used for the purpose, on account of the whalebone being stripped up by the end of the catheter, which prevented its onward passage. Indeed, I did not feel quite sure that the guide had penetrated the stricture, since, from its firm, unyielding character, it is liable to make a false route, which I consider the great objection to its employment. I was therefore not at all sorry that the catheter could not be passed over it.

All means for procuring the discharge of the urine by the natural channel having signally failed, and in view of the urgency of the symptoms and the dangers of delay, the only remedy left was to relieve the bladder by making an artificial opening into some point of the urinary organs. As I do not regard puncture of the bladder above the pubes a proper, or even desirable, operation, except in cases of retention from prostatic tumors, my first thought was to tap that viscus through the rectum; but examination disclosed so much hypertrophy of the prostate gland that my finger could not be carried to its posterior border, thereby excluding that proce-

* *Medical Record*, May 15, 1869.

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dure. While my finger was in the bowel, and in contact with the prostate, it occurred to me, however, that the membranous urethra could be readily opened through the middle line of the perineum, the apex of the prostate serving as a prominent landmark, through which operation a free and direct outlet for the urine would be afforded. Taking my seat on a low cushion in front of the perineum, the patient having been placed in the usual lithotomy position, I passed my left index finger, with its palmar surface upward, into the anus, and brought its tip in contact with the apex of the prostate, the bulge of the rectum having been effaced as much as possible by carrying its anterior wall backwards by my nail during the introduction of the finger. I then placed the point of a long, straight bistoury in contact with the raphé, five lines in front of the anus, the back of the knife presenting towards the bowel, while the handle was somewhat depressed, and, thrusting it upwards and backwards, as if to strike the tip of my finger, I succeeded in puncturing the membranous urethra at about its centre, as was indicated by the escape of bloody urine. On withdrawing the knife, I enlarged the urethral wound, and incised the superficial structures exactly in the middle line and upwards towards the scrotum to the extent of nearly one inch. Through the free opening thus made the urine gushed in a full stream, when a flexible No. 10 English catheter was inserted into the bladder, by which the remainder of the urine was drawn off, the total amount having been about three pints. There was pretty smart hemorrhage from the division of the bulb, probably to the extent of ten ounces, but, as it seemed finally disposed to coagulate around the catheter, this was allowed to remain, its projecting portion having been cut off. The patient was put to bed, with a sponge between his thighs to absorb the urine which was constantly trickling from the catheter, and one-third of a grain of morphia was thrown under his skin. To Dr. Graham, Dr. Dickson, Dr. Barton, Dr. Hearn, and Mr. Newcomb, I am indebted for their assistance during the operation.

Without entering into minute details, the following condensed notes from the daily record will indicate the progress of the case. 5th, A.M. Passed a good night, and expresses himself as entirely relieved; the catheter escaped from the bladder during the night, and clear urine is passing by the incision. 6th, A.M. Suffered from chilly sensations yesterday afternoon, followed by slight fever and nausea. 7th, A.M. The urine has ceased to trickle from the wound, it having been passed voluntarily by that route last night, and at five and ten o'clock this morning; some fever. 9th, A.M. Patient will be permitted to go home to-day. Herpes phlyctenodes abundant about the lips, nose, and cheeks. Has been retaining his water for four or five hours at a time. 28th. Herpes has entirely disappeared, and he has been sitting up for the past week. The perineal wound has contracted to one-fourth of an inch in length, but it permits the free escape of the urine. For the past two days, at each act, a few drops have passed by the natural channel, and a No. 4 bougie, French gauge, penetrated the stricture. 29th. Under chloroform, a conical steel sound, the point of which measured No. 2, and the shaft No. 8, English gauge, entered the bladder without much difficulty, when it was replaced by Richardson's dilator and a No. 12 rod forced between its blades. A free passage having been made by these measures, I was enabled to introduce a urethrotome and divide the stricture, which was two inches long, from behind forwards on three sides, which I deemed advisable to insure a better chance for permanent relief. A No. 22 French vulcanized india-rubber catheter was then tied in. 30th. No urethral fever; slight purulent discharge at the meatus; but, as the instrument is tightly grasped by the urethra, and is giving rise to no inconvenience, it will be permitted to remain. June 1. The catheter came away early this morning. 3. Introduced a No. 14, English gauge, steel sound with the greatest ease, and the patient was directed to take out-door exercise. 9. Perineal wound has closed; the same sound has been used every forty-eight hours, and the patient resumed his business three days ago. Subsequently a No. 22 French bulbous-ended bougie, which is equivalent to No. 12, English gauge, was introduced by the patient at intervals of two days for three weeks, then every four days for a month, and he now employs it at intervals of one week.

Remarks.—The preceding case of retention of urine is the only one that I have ever met with in which I have felt it incumbent upon me to establish an artificial channel for its evacuation. Here was a chronic, narrow, indurated stricture of the scrotal and antescrotal urethra, temporarily obstructed by spasm and congestion, which would neither admit an instrument nor permit the flow of urine. Deeming external urethrotomy, particularly without a guide, a bad procedure, on account of the hazard of urinary infiltration and the difficulty of closing the incision, I chose an operation, in preference to vesical puncture, which fulfilled perfectly the objects for which it was designed,—namely, the immediate relief of the retention, and the subsequent spontaneous permeability of the canal. Three weeks after its performance some urine made its appearance by the natural passage, and the stricture had so far loosened itself as to admit instruments, through which the normal calibre of the urethra was finally restored. It has long been a recognized fact that when a stricture is relieved from the irritating influences of constant attempts at micturition and the pressure of the urine, it sooner or later becomes so much relaxed as to allow urine to pass and a catheter to enter. This effect may be secured by any of the procedures for emptying the bladder. Hence operations for dividing the obstruction are not always absolutely necessary; and the young practitioner who fears to encounter the difficulties and dangers of cutting through a stricture without a guide, may have the satisfaction of knowing that, by temporarily establishing an artificial route for the discharge of the urine, the local irritation about the stricture will subside and enable him to attempt its management by the ordinary means.

To fulfil these desirable objects,—namely, to unload the bladder and allow the urethra to recover itself,—what operation should be selected? Of the different modes of puncturing the bladder for the relief of retention, that by the rectum is the one usually adopted, suprapubic puncture being restricted to those rare cases of retention from prostatic trouble which cannot be reached by the former procedure. Now, recto-vesical paracentesis is not difficult, neither is it devoid of dangers and drawbacks. During its performance the bladder has been transfixed or missed altogether; the vasa deferentia and vesiculæ seminales have been wounded, and, in one instance at least, the inflammation has extended to the testicle, which suppurated; abscesses have formed between the bowel and bladder in the track of the canula; in one case, narrated by Mr. Erichsen, rectal flatus diffused itself through the cellular tissue of the pelvis and down the thighs and nates, giving rise to emphysema of those parts, and eventuating in the death of the patient; the peritoneum may descend very low and be wounded; a permanent fistule may remain between the viscera; effusion of urine is to be dreaded; both bladder and rectum are opened, when there is no necessity for it; and, finally, enlargement of the prostate forbids its performance.

Such being the dangers and disadvantages of rectal puncture, and the objections to it, laying open the membranous urethra through the perineal raphé, by which an easy, free, and direct outlet is afforded to the urine, is left for the consideration of the surgeon. This operation is neither new in performance or in principle. Indeed, it dates back upwards of two hundred years, it having been first done in 1652 by Mr. Edward Molins, of London,* and was advised and practised in the present century for cases similar to the one I have recorded, in preference to tapping the bladder, by such men as Mr. Grainger, Sir Charles Bell, Sir Astley

* Several Chirurgical Essays. By Richard Wiseman. Second edition, pp. 574. London, 1686.

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Cooper, Mr. Liston, Mr. Bransby Cooper, Mr. Arnott, and Mr. Simon, the last-named surgeon having habitually performed it. That it has not continued in favor is, I think, due to the impulse given to recto-vesical paracentesis by Mr. Cock, of Guy's Hospital, which procedure, possibly from its bloodless and apparently simple nature, appears to have completely driven it from the field of operative surgery. At all events, I do not find that it has been practised of late years abroad; and I believe my own operation to be the only one of the kind ever done in this country.

The operation itself being one of great simplicity to the practical anatomist and surgeon, I introduce it to the notice of the profession, in order that it may be fully and fairly tested, with the view to supersede the operations of tapping the bladder. The practitioner who urges the objection—and it is the only one which can be brought against it—that it requires minute anatomical knowledge, forfeits the right to perform it; for if he has not made himself familiar, by dissections, with the relative situation of the prostate, the membranous urethra, and the bulb to the perineal portion of the rectum, he had best practise rectal puncture, or, still better, relinquish the patient to the surgeon who fully understands his business, for he is morally wrong in taking such cases. Performed in the way that I have indicated, nothing can be more simple or expeditious. The membranous urethra occupies a fixed and invariable position in the median plane of the perineum, and in many cases of inveterate stricture at the usual locality it may be felt to be distended by the urine. The prostate gland, which is the great landmark in the operation, also occupies a definite position; and the statement made by some writers that it recedes in consequence of the vesical distention is visionary. Both prostate and membranous urethra are readily distinguished by the finger in the rectum. The space in which the operation is performed is known as the recto-urethral triangle, and examination of a vertical section of the wet pelvis, which passes through the median line of the triangle, will disclose the following relative positions of the parts concerned: Commencing behind, the prostate will be seen lying within one line of the anterior wall of the rectum, which viscus, at the summit of the gland, turns slightly backwards, to terminate at the anus. The bowel forms the posterior wall of the triangle, and it is highly important to note that it forms a marked dilatation above the sphincters, which rises at least half an inch above the dependent anus. The anterior boundary of the space, it will be observed, is formed by the membranous urethra, which curves somewhat forwards, overlapped by the bulb, while the base of the triangle is at the surface and the apex at the prostate, and it is through the soft parts that fill these boundaries that the knife is thrust to open up the urethra. The depth and width of this space vary in different subjects, but numerous observations and examinations made during a series of years enable me to give what I believe to be the average distances in the medium-sized adult. The distance between the verge of the anus and the bulb—the base of the triangle—is four-fifths of an inch, while the rectum is seated half that distance from the bulb. The membranous urethra is situated ten lines in front of the rectum and sixteen lines above the anus; and the antero-posterior diameter of the space, or the distance between the apex of the prostate gland and the external skin, is about twenty lines.

From the preceding considerations, it is obvious that the only structures at all endangered are the rectum and the bulb. Wound of the former viscus may easily be avoided,—first, by carrying its anterior wall backwards by the finger introduced into it; and, secondly, by effecting the puncture with the blunt back of the knife directed towards it. As an additional precaution, the bistoury may be slightly curved, as was recommended by Sir Charles Bell* and Mr. Arnott.† The bulb can only be injured by prolonging the incision made on the withdrawal of the knife too far forwards, and it must, of necessity, be divided by an incision one inch long from a point half an inch above the anal aperture, as I made it. Free hemorrhage is not, however, to be anticipated, particularly if the division has been effected precisely in the raphé. Should it occur, and not cease spontaneously, it can readily be checked by inserting a catheter through the wound into the bladder, and plugging with lint around it. For my own part, I do not consider division of the bulb as a matter of much importance, as any disadvantages that might arise from it are outweighed by an incision which gives a free and direct outlet to the urine. When, however, it is deemed prudent to avoid the loss of blood,—as when the patient's powers are exhausted by chronic urinary disease,—a smaller cut, or a mere puncture, may be made. For this purpose the bistoury may be entered two-fifths of an inch above the anal aperture, and a cut of the same length be made upwards. Limited to this extent, the bulb will not be touched, nor will the rectum be endangered at the point of puncture.

A CASE OF SUCCESSFUL OVARIOTOMY.

BY J. H. GROVE, M.D.,
One of the Surgeons to St. Mary's Hospital.

THE following case is put on record as presenting, in addition to its successful termination, one or two points of practical interest.

Mrs. H. W., aged 62, resident of this city, states that menstruation commenced at the age of fourteen and ceased at fifty-two. She married at the age of twenty-four years, and has borne two children, the first one year after her marriage, and the second one year after the first.

In March, 1867, she noticed an enlargement in the right iliac region, which slowly progressed until August 4, 1868, when I was first consulted by her. At that time the abdomen was larger than at the full period of pregnancy, and there was distinct fluctuation on palpation. I tapped the patient, and removed thirty-eight pints of light-colored fluid, which coagulated firmly when subjected to heat. After the removal of the fluid, a resisting, irregularly-formed mass was felt occupying the lower portion of the abdomen.

From August 4, 1868, to June 28, 1870, I tapped her six times, removing varying quantities of fluid. After each tapping the fluid reaccumulated with increased rapidity, and the tumor was found to have increased in size, making the tapping necessary at shorter intervals, so that the time intervening between the last two was only six weeks. Up to April last her general health continued good; but about that time it began to decline, and she became considerably emaciated.

On June 28, 1870, the fluid had reaccumulated in large quantity,—the abdomen being excessively distended and very tense; there was also œdema of the lower extremities, and the patient was considerably emaciated and feeble; the pelvis was free; the uterus movable, penetrable by the sound, and central. After consultation, ovariotomy was decided upon and performed, the following-named physicians being present: Drs. L. S. Bolles, G. A. Rex, M. D. Jones, of Philadelphia, and J. Ott, of Easton, Pa. Anæsthesia having been produced by the use of a mixture of two parts, by measurement, of sulphuric ether and one part of chloroform, an incision three inches in length was made along the linea alba

* Institutes of Surgery, vol. i. p. 305. Edinburgh, 1837.
† *Medical Times and Gazette*, vol. iv., N. S., 1852, p. 451.

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down to the cyst. In consequence of the extreme distention, the presenting cyst extruded through the incision as far as it would admit, pressing against the abdominal parietes with such force that the fingers could not be introduced between them and the tumor until the presenting cyst was evacuated by the trochar. On introducing the fingers, adhesions were found to exist between the tumor and abdominal parietes, to separate which it was necessary to enlarge the incision so as to measure four and a half inches. After this, the hand was introduced into the abdominal cavity, and the adhesions, which extended over a large portion of the anterior and lateral abdominal parietes, were separated with slight force, excepting over a space in the left hypochondrium, measuring about four by five inches, where it required great force to break them up. The tumor was free from connection with any of the abdominal viscera. After the adhesions were detached, a second large cyst and several small ones were evacuated through the opening made in the presenting cyst, giving exit to fluids of different colors and consistencies. The tumor, being thus reduced in size, was drawn through the incision by gentle traction. The pedicle, which involved the right broad ligament of the uterus, was very thick, and so short that to have secured it by the clamp would have caused great traction on the uterus; the base of the tumor, which consisted of a large cyst, was therefore secured by placing Mr. T. Spencer Wells' large clamp about one and a half inches from the pedicle, after which the tumor was severed and the clamp placed upon the surface in the usual manner. No hemorrhage occurred, so that no ligatures were required.

After carefully applying the clamp, and removing the tumor, the hand was passed down into the pelvic cavity, and the left ovary examined and found to be healthy. The uterus also, as had been ascertained before the operation, was perfectly healthy. The incision was closed by four interrupted and three silver-wire sutures. The suture-pins were passed down to the peritoneum, but did not include it. The silver-wire sutures were superficial.

The tumor consisted of the right ovary, and was multilocular in character, having two very large cysts of about equal size, a great number of secondary cysts, together with a large semi-solid mass; it contained thirty-nine pints of fluid and weighed forty-five pounds.

The patient suffered very little shock by the operation. Immediately before it, the pulse numbered eighty-four, and, immediately after, eighty-eight, varying subsequently from eighty-two to one hundred and six. No nausea or vomiting occurred, and the patient rapidly recovered, without an unpleasant symptom.

The sutures were removed on the seventh day, when perfect union had occurred. The clamp was removed on the ninth day, when it was found that the outer surface of the part of the cyst remaining in contact with the edges of the incision was well united, while the inner surface below the clamp had secreted and contained about a half-ounce of white gelatinous fluid, the same in character as that contained by the cyst at the time of the operation. This left a conical-shaped cavity about two inches in depth, the lining membrane of which was the inner surface of the cyst, and which continued to discharge the same character of fluid for about four days after the clamp was removed, after which the discharge ceased and the surface commenced to granulate. By the use of strips of adhesive plaster over the abdomen, the sides of this cavity were kept in contact, and in a short time united, forming a solid pedicle. This result shows that when an ovarian cyst has no pedicle, or one so short that to secure it by the clamp would cause much traction on the uterus or the broad ligament, the clamp may be placed upon the base of the cyst sufficiently high to prevent traction, and an equally favorable result be expected.

REMOVAL OF A MALE CATHETER FROM THE FEMALE BLADDER.

BY J. C. REEVE, M.D.,
Dayton, Ohio.

IN the latter part of July last, I was called to see a young married woman laboring under unmistakable symptoms of vesical calculus. Her sufferings were extreme; she was compelled to spring out of bed in my presence, get on the chamber-vessel, and strain violently. For relief from these sufferings, she had resorted to large doses of morphia. There was nothing obscure in the history of the case. I was told that, five months before, she had broken off a piece of a catheter in her bladder. In reply to my inquiries as to why she was using such an instrument, I was told it was for "drawing her water." As she was about five months pregnant, others may believe as much of this explanation as they please, and I shall do the same. She had been under the care of three different practitioners since the accident happened, to one at least of whom the same story had been told as above, as he had assured the patient that it would soften and come away with the urine.

Physical examination yielded abundant evidence in confirmation. A large and irregular mass was readily felt up behind the pubes, by the fingers in the vagina, and a silver catheter introduced through the urethra came in contact with a foreign substance in the bladder.

Had not her sufferings demanded relief, her approaching labor would have necessitated the removal of the foreign body; and on the next day I proceeded to operate. I first attempted gradual dilatation of the urethra, by packing the canal full of sea-tangle tents, intending to follow them with tents of compressed sponge; but the pain and distress occasioned compelled me to abandon this plan: it was impossible for her to bear the tents but for a few minutes. I then placed her under chloroform, and dilated the urethra with dressing forceps, followed this with polypus forceps, then introduced my finger, and upon this a pair of lithotomy forceps, and, after two or three trials, dragged out, with no little surprise, an entire gum male catheter of medium size, and measuring nine and a half inches in length! I had caught it near one end, but, in its softened condition from maceration, it readily bent close on itself, and came out thus doubled. The bladder was full of putty-like, calcareous matter, which was turned out with the finger. There were two concretions, however, about the size of chestnuts, evidently accumulations around calculary fragments broken off from the catheter; these I have preserved with the instrument. The bladder was washed out, the patient placed in bed, and made a rapid recovery. She could perfectly control her urine on the day following the operation.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

MEDICAL CLINIC, SATURDAY, SEPTEMBER 24. SERVICE OF DR. WILLIAM PEPPER.

JAUNDICE FROM OBSTRUCTION OF THE HEPATIC DUCT.

THE lecturer presented the specimens which had been removed at the autopsy of the patient, suffering with jaundice, who had been before the class on September 10, and briefly recapitulated the points of the case to which attention had then been directed. The patient was a man, aged 65 years, and had been admitted to the medical ward on Septem-

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ber 2, 1870. The history obtained from him showed that he had enjoyed good health until four months before admission, when jaundice gradually appeared. The yellowness grew steadily more and more marked, and he lost flesh and strength rapidly. He had never suffered from an attack of hepatic colic; and the present sickness had come on without pain. On admission the jaundice was intense, affecting the conjunctivæ and the whole cutaneous surface; the mucous membrane of the mouth, especially the part covering the inside of the lips and the under surface of the tongue, was also distinctly yellow. His mind was clear, but dull, and he usually lay in an apathetic, lethargic state. His weakness was so great that he rarely left his bed, and his emaciation was extreme. There was entire anorexia; the bowels were constipated, and the stools grayish-white in color, tough, and very offensive. No free fat was observed in the stools. The urine was rather scanty, and contained no albumen, but was dark-brown in color. Tests showed the presence of abundant bile-pigment; but, on applying to it Hoppe's test for bile-acids, none were detected. The abdomen was meteoric from intestinal flatus. The area of hepatic dulness was normal, and no tumor or irregularity of the surface of the liver could be felt. The gall-bladder could not be detected. There was no tenderness over the liver. The skin was usually dry; perspiration, when it occurred, was deeply stained yellow.

In commenting upon these facts at the previous lecture, it had been pointed out that there were no symptoms to indicate that the jaundice was of blood-origin. Nor was there any evidence that it was due to primary disease of the hepatic tissue, destroying its secreting power. On the other hand, the gradual development of the disease, the absence of cerebral symptoms, and the complete absence of bile from the intestinal canal, as shown by the pipeclay-colored stools, all indicated that the jaundice was caused by complete obstruction of the hepatic duct or the common bile-duct. The fact that it was impossible to detect a distended gall-bladder was, to a certain extent, evidence in favor of the seat of obstruction being in the hepatic duct.

The urine had been most carefully examined, in the hope of further confirming this view. When jaundice is due to suppression of the action of the liver, or to blood-poisoning, the urine may be deeply stained, and tests may demonstrate the presence of bile-pigment, but no bile-acids are present. On the other hand, when the liver continues its secreting work, and the gall-ducts are obstructed, so that the bile is reabsorbed into the blood, it would seem that there should be a vicarious excretion by the kidney, not only of bile-pigment, but also of bile-acids. It has been frequently asserted that such is always the case; but the lecturer stated that to his own mind the clinical evidence appeared insufficient. In the present case, therefore, the urine had been carefully tested, and no bile-acids found. It is indeed true that, in cases which are primarily due to mere obstruction, the bile-acids might disappear from the urine late in the course of the disease, owing to the fact that the retained bile compressed the hepatic tissue to such an extent as finally to seriously impair its nutrition and arrest its function. Still, were the above view absolutely correct, the absence of bile-acids might be regarded as powerful evidence against the theory of the jaundice being due to obstruction of the hepatic duct. But the true value of the presence or absence of bile-acids from the urine in cases of jaundice seemed rather to be that, when present, there is strong evidence in favor of the existence of obstruction, but that, when absent, it is still doubtful whether there is or is not obstruction, since it is highly probable that, in some cases, the bile-acids might be retained in the blood, or else so altered and decomposed that they could no longer be detected by testing the urine. Assuming, then, in the present case, that the jaundice was due to obstruction, it remained to determine the cause of this obstruction. These causes may be various, and may be seated externally to the bile-ducts, or within these passages. Thus, pressure on the ducts might be caused by a tumor, either solid or cystic, seated either in the substance of the liver or near its transverse fissure. It has been already noticed that no tumor could be detected in connection with the liver. It is, indeed, true that a small tumor might be imbedded in the substance of the liver so as to compress some of the radicles of the hepatic duct, and yet not cause any perceptible enlargement of the organ. But the entire absence of bile from the intestines would seem to necessitate an obstruction either of the main hepatic duct or the common duct itself, so that we must suppose the tumor, if such there were, to be seated in the transverse fissure.

Hydatid tumors of the liver are extremely rare in this city, and, further, they are usually prominent and readily detected, it being very uncommon for them to be seated near the transverse fissure. On the other hand, the advanced age of the patient, the gradual development of the disease, the intensity of the jaundice, would all seem to point to cancerous disease of the lymphatic glands in the fissure of the liver. Against this view may be urged the rarity of primary cancer of the liver and the absence of pain and detectable tumor in this case; but, on the whole, it must be admitted that this is one of the least objectionable explanations of the obstruction.

Obstructions seated within the bile-ducts may be either due to thickening of the mucous membrane, or to cicatrization following ulceration, or to foreign bodies, such as biliary calculi. Either of the first forms of obstruction are always preceded by the symptoms of inflammation of the bile-ducts, frequently occurring in conjunction with intestinal inflammation. No such symptoms have been present in the case under consideration.

Again, however, it is very rare for impaction of a biliary calculus to occur without pain, and without there having been a history of previous attacks of hepatic colic. Still, we must admit that a calculus might gradually be forced onwards through the hepatic duct until it finally became impacted and completely obstructed the tube, without giving rise to any severe suffering. The age of the patient was in accordance with such an explanation, and the emaciation and debility could be readily explained by the entire prevention of the entrance of bile into the intestine. After carefully reviewing these points, therefore, it will be remembered that the conclusion arrived at was that the jaundice was due to entire obstruction of the hepatic duct, and that this obstruction was caused either by a cancerous nodule in the transverse fissure pressing on this duct, or, more probably, by the impaction of a biliary calculus at some point of its course. The prognosis was stated to be entirely hopeless, and the treatment adopted was merely palliative. In fact, two days after the above remarks were made he rapidly became worse, the urine grew very scanty, the mind became very dull, and subsequently coma supervened, and the patient died September 14.

At the autopsy, all the viscera were deeply stained yellow. The kidneys contained numerous large cysts. The specimen exhibited to-day is the liver, which is of normal shape, somewhat enlarged in size, but much more dense and heavy than normal, weighing five pounds. The liver tissue is deeply stained with bile, and is coarse-grained, as though in the first stage of cirrhosis. The radicles of the gall-ducts throughout the organ are much dilated, and filled with grumous bile. The larger branches of the hepatic ducts, as you approach the transverse fissure, contain numerous polygonal brownish-black gall-stones. The hepatic duct itself is enormously dilated (at least one inch in diameter) and is filled with very numerous calculi. These calculi, for the most part, measure one-fourth to one-third of an inch in diameter. There is one, however, fully two-thirds to three-fourths of an inch in its measurements, and with rounded edges, which is firmly impacted in the hepatic duct, just above its juncture with the cystic duct. The common duct itself is somewhat dilated, either from the previous passage of smaller calculi or, more probably, from the dilating action of the impacted stone. The gall-bladder is considerably distended with light-colored bile, and contains numerous minute blackish calculi. There is no thickening, inflammation, or ulceration at any point of the biliary passages.

MACMILLAN & Co. have nearly ready for simultaneous publication in London and New York an important work on the Relations of Body and Mind, by Dr. Maudsley, author of "Physiology and Pathology of the Mind." Dr. Maudsley's well-known eminence in mental science will bespeak for this book a welcome from all professional men. It will be published in a handsome crown octavo volume.

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EDITORIAL.

ARMY MEDICAL ORGANIZATIONS OF FRANCE AND PRUSSIA.

THE medical record of the great European international conflict of 1870 is an unwritten chapter in the history of the times. The most reliable medical authorities are too busy witnesses and participants in the urgent duties of the field to gather up, as yet, the ripening fruits of their experience, and for the present the scanty information derived from itinerant correspondents of journals is nearly all the material accessible to us. The turmoil and bustle of battle have been incessant, and at this very moment, after but a few short weeks of conflict, it is even possible that the world, in its generous and spontaneous sympathy, may be binding the laurel on the brow of the victor. It takes but little heed, however, of the earnest, unobtrusive, self-sacrificing devotion of the army-surgeon, which is to stamp itself permanently on the after-history of the war by numerous substantial contributions to science, and valuable suggestions for the greater perfection of surgical art. When the hills and valleys once more re-echo with the welcome sounds of peace, the propitious time will come when the now fragmentary history of this great Franco-Prussian struggle will be assigned its proper place in the eventful record of the year. From the available representative men in the profession, let us hope that each nation will select the most skilled and judicious to treasure up and classify the rich resources within their reach.

The medical organization of the Prussian army seems, at the very outset of the war, to have been much more perfect than that of their opponents. The greater readiness with which the former accepted volunteer surgical aid from abroad would not indicate that their service was defective either in numbers or efficiency, but that they received with alacrity such substantial offers of assistance as might alleviate the inevitable miseries of the war. In this they did an impartial kindness to friend and foe alike, for both would eventually be benefited by the additional facilities for relief thus offered. But, apart from all question of volunteer assistance, the complaints of inefficiency against the French regular medical organization have been frequent and earnest, even among their own countrymen, and the feeling was universal, at the outbreak of this war, that no change for the better had taken place, even after the bitter experience of the Crimean and Italian conflicts. The French Minister of War gave a very telling illustration of this, early in the history of the struggle, in his positive refusal to respond to the well-directed interrogation of M. Brenier, a senator, on the subject of the medical organization of the army, its efficiency and its capabilities, founding his excuse for evasion on the shallow pretext that it would impair the feeling of confidence that should prevail throughout the army, although he thus virtually acknowledged that its deficiencies would not stand the crucial test of investigation.

It is probable that some of these weak points have been hastily repaired within the last few weeks; but the rapidly-passing events of the war, which, in their results, were for a while continuously unfavorable to the French, gave but little time to remedy defects which were incorporated into the very structure of the whole medico-military system. In the interval of peace which elapsed between France's last great war and the present, the cause of the wounded seems to have slumbered, and not to have thoroughly awakened until the thunder of artillery resounded near her own homes and firesides. Otherwise we should not have expected to hear from all quarters so many stories of inefficiency in the ambulance system, of such lack of preparation for the certain miseries of a bloody conflict, of the disproportionate numerical ratio of surgeons to the wounded, and of the deficiency of thoroughly systematized modes of relief.

In the *Revue des Deux Mondes* for August 1, 1870, we find, from the able pen of M. Michel Chevalier, a member of the Institute, a carefully-written article, entitled "Des Services de Santé d'une Armée en Campagne," which assumes the importance of a critical review of the action of the government in its mal-administration of the sanitary affairs of the army. From such a source the charges of inattention and neglect carry with them much more weight than if they were the mere transient effusions of irresponsible correspondents of the press. His views are founded on the recorded experience of the Crimean war; and it is painfully evident, from his severe and caustic criticism, that but little improvement had been effected at the time of writing the article, when the nation had already taken the fatal step and plunged into the uncertainties and vicissitudes of war. He charges the government with violating the most important laws of hygiene in the crowding of ambulances, infirmaries, and hospitals, and in the want of proper attention to their ventilation. The official medical authorities have, in their zeal for the public good, reiterated their sentiments as to the pressing needs of the service; and it would naturally be supposed that some attention would be paid to their demands, and the proper remedies applied. The Franco-Austrian war, which followed three years after that in the Crimea, found everything in exactly the same state of inefficiency. In this campaign there were only 132 medical officers for 160,000 men,—an average of less than one surgeon to 1000 men; only nine surgeons of the French army at Milan to more than 8000 badly wounded, after Solferino.

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M. Chevalier also animadverts severely on the absence or deficiency of the most indispensable surgical instruments and appliances, etc., contrasts this with the excellent medico-military arrangements in the great American civil war, framed by the government to meet all existing and threatening exigencies, and calls special attention to the fact that in France the army-surgeon is in a state of absolute dependence on the "Corps des Intendans" for all the means of vitality essential to his official existence. It cannot be denied that this subordinate position occupied by the medical corps, in which the commissariat controls the action of the surgeon and limits his sphere of usefulness, —often withholding the needed supplies even when most urgently besought to grant them,—has been the main cause of all the short-comings of the government in its relation to the health, care, and comfort of its soldiers. The comments of medical men of the highest rank in France have been frequent and bitter; and it is exceedingly probable that the Minister of War and his associates would have made it a matter of profound study, had not the war with Prussia burst upon them before their dilatory efforts at the amelioration of the system came to any very promising result. But little can be expected, however, of the government until it learns—what sad experience may now be teaching the whole country—that the laws of hygiene, especially the hygiene of the camp and the hospital, are coequal in importance with public politics or military strategy.

Many of the defects that existed in the medico-military organization of Prussia during the Schleswig-Holstein war were promptly appreciated and speedily corrected by the best civil and official talent of Germany. A thoroughly systematized plan was perfected, partly as the result of the actual experience of the needs of former wars, and to some extent, doubtless, of the advanced civilization of the age. A detailed account of the wonderfully improved sanitary organization of the Prussian army as it existed at the beginning of the present war, bearing upon its face all the evidences of accuracy and reliability, was published in the Berlin special correspondence of the London *Lancet*, a few weeks since (August 6, 1870, p. 202); and, as it is much more available and intelligible than any government blue-book, we extract from it some valuable items of information.

The army medical staff is composed of surgeons of the regular army, and civilian practitioners who are ordered to the military service on the outbreak of a war, all under the command of a general staff surgeon. The number of the first amounts to 900, that of the Landwehr to 1000. But the medical staff is, at the moment war is declared, much greater, because almost all young medical graduates enter the service as volunteers. According to an old Prussian custom, two soldiers per company are, during the general military service, instructed in minor surgery, to be medical servants, with the rank of non-commissioned officers. It is their duty to attend to the orders of the surgeons, and to perform the smaller operations of dressing wounds, etc. There is connected with the medical staff yet another class of soldiers, called the corps of sick-bearers (*Krankenträger*), composed of soldiers who have learned, in a short course, the elements of human anatomy, and the methods of bandaging and of transporting the wounded in a convenient manner. The number of these assistants may amount to 200 for every army corps. Added together, the total number of persons charged with the care of soldiers amounts to several thousand in every 100,000. The vanguard of the army medical service consists of the surgeon accompanying the troops, and of the sanitary detachment; the centre, of the attendance of the ambulance hospitals; and the reserve, of the surgeons of the reserve hospitals. Each sanitary detachment is composed of 2 staff surgeons, 3 assistant surgeons, 5 medical servants, and 125 transporters of the wounded; and it is furnished with two wagons, containing a dispensary, with the usual drugs, instruments, lint, etc. etc., and a number of carts and omnibuses for the transportation of the wounded. The ambulance hospitals, to which these are carried, are headed by a chief surgeon, a surgeon, and three assistant surgeons, with an apothecary, nine medical servants, twelve nurses, and other officers. To its equipage belong two wagons, each containing a complete apothecary's shop, a store of surgical instruments, lint, bandages, etc., and six wagons fitted with all the arrangements for establishing 200 beds. The chief surgeon has to select, near the battle-field, the best buildings for hospital purposes. The reserve hospitals, to which patients are afterwards transferred, are scattered over Germany, in almost every town.

The slight sketch we have thus given of the regular army medical organizations is, as we have already said, founded on the condition of things existing in the earlier days of the present struggle. Sufficient time has not yet elapsed to call forth any authenticated statements to show that the defects complained of have been remedied, or that the government has instituted any radical changes in its system of management. The formation of extensive volunteer organizations for the relief of the sick and wounded, and the establishment of volunteer ambulances by the patriotic contributions of the people of both nations, have fulfilled important missions in the relief of thousands; but it remains to be seen hereafter, when the medical history of the war is placed on permanent record, how much their efficiency has been interfered with by official mismanagement, and by defects that lie at the very root of the whole governmental medico-military system.

ACCORDING to the *Pharmaceutical Journal*, Professor Huxley, in a speech recently made upon the occasion of the distribution of prizes to the students at University College, said that, if he had his way, he would abolish materia medica altogether from the medical curriculum. This reminds us forcibly of the old adage, "A little nonsense now and then is relished by the best of men." And yet our professor has only

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mistaken—not for the first time, either—a half truth for a whole truth, and set it forth in his own bluff, slashing, impulsive way. To study materia medica as he appears to have studied it,—to learn the physical properties, method of production, natural history, and characters of the plants concerned, as well as the habits of the natives of the country yielding the drug, and other innumerable details collected by the industry of a Pereira, and this, too, not merely of important drugs, but of every herb and seed, root or leaf, floating in the world-wide commerce of London,—surely this is a burden to make the student sigh for relief.

Enough of the natural history and sources of the more important drugs to make the doctor a man of some culture in his profession should, we conceive, always be taught; yet we make no doubt that in some of our colleges too much time is spent upon these, to the exclusion of the weightier matters of the law.

Leaving out of sight therapeutics altogether, materia medica is by no means comprehended in these not immediately practical details. The physical characters of drugs, their adulterations, their active principles; the appearances and distinguishing tests of the latter; the comparative value and physical characters of the various preparations; above all, the chemical relations of the various drugs and preparations—these and other subjects make the practical part of materia medica, to strike out which from our medical studies would be to introduce confusion, uncertainty,—aye, even lethal ignorance,—into the daily practice.

How often have we seen silly and sometimes sadly fatal mistakes arise from want of such knowledge! Thus, syrup of squills and carbonate of ammonia—both stimulant expectorants—are frequently prescribed together, even by men deservedly high in the profession, through ignorance that, the former being made with vinegar, the combination is equivalent to squill and spirit of mindererus.

Not long since we met, in the country, a physician second to almost none in medical culture, who described three cases of extraordinary collapse with terrific vomiting, following the use of fluid extract of buchu. In the first two cases he had not thought of ascribing the symptoms to the medicine, but in the third, which nearly proved fatal, he could not avoid doing so. On smelling his bottle of fluid extract, which had been furnished by one of our most reliable drug firms, the rank odor of veratrum viride saluted us, instead of the aromatic smell of buchu. How nearly had the absence of some practical knowledge of important drugs compromised the life of his patient!

It is only a few weeks since a fatal case of poisoning occurred in this city from an error dependent upon ignorance which, we venture to say, three out of four practitioners might make. Strychnia was prescribed along with iodide of iron in syrup of ginger, and consequently large crystals of the nearly insoluble iodide of strychnia were precipitated. Everything went well until the patient took the last teaspoonful in the bottle, which contained all of the alkaloid, and consequently killed her.

Did time and space suffice, instances could be multiplied showing the absolute necessity of the study of materia medica to the medical student, a necessity so plain that the non-recognition of it by Professor Huxley excites our astonishment. We would not accuse him of desiring to gain popularity with the students by advocating a decrease in the amount of work required of them, but we do think his assertions show that absence of sympathy with the needs of the practitioner which is often so palpable in those who, although holding some connecting thread with the profession, are yet in reality pure scientists.

It is our pleasant duty to announce that, in consequence of the rapid increase in the list of subscribers to the Medical Times, and the unexpected pressure of valuable material for publication, it has been determined to enlarge the journal by four pages. All subsequent numbers will, therefore, contain twenty double-column quarto pages.

CORRESPONDENCE.

DERMATOLOGY ABROAD.

LETTERS FROM L. A. DUHRING, M.D., OF PHILADELPHIA.

Vienna, June 1, 1870.

Personal observation of the hospitals of London, Paris, and this city induces me to think it may prove interesting to give a brief account of dermatology in these cities,—to examine the manner in which it is taught, to compare the different schools, and notice particularly certain diseases confined almost exclusively to special countries. There are in Europe, at the present epoch, three schools of dermatology, each one holding distinctive theories and opinions, and, as usual in such cases, clinging tenaciously to its own doctrines as the only correct ones. It is only by taking a careful survey of the various hospitals and dispensaries, by looking into their management, comparing statistics, noticing the forms of disease, and, finally, by observing the treatment and its results, that we can arrive at any definite conclusions. Statistics alone will not suffice to give us a correct idea of dermatology; reports of hospitals and dispensaries merely tell us that so many cases were admitted, treated, relieved or cured, and discharged, giving no enlightenment as to the varied aspects of the same disease in different countries. Closer study is needed to show the effect of climate, habits, temperament, and other causes, all of which greatly influence cutaneous affections, deciding their appearance, form, evolution, and ultimate termination. But I shall return to this, and in the mean time speak of the German school as found in Vienna at the present day. The General Hospital, or "Allgemeines Krankenhaus," is a government institution, situated just outside of the centre of the city, and encircled by laboratories, schools of anatomy, physiology, and chemistry, making this literally the students' quarter. The building is old, though in good repair, with accommodations for about two thousand patients; it is the largest hospital in the world, and, for its size, a model of management. As we enter the gate, we cannot help being struck with its vast proportions and the bewildering effect of its innumerable courts and passages. Having found our way through three extensive

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courts, or "Hofs," as they are called, a small sign-board over a door notifies us that we have arrived at the "Department for Diseases of the Skin." This consists of eight wards, each containing about twenty-five beds, the apartments being large, well lighted and ventilated. The medical direction of this department is under the charge of Professor Hebra, a man whose renown is so world-wide, and whose name is so intimately associated with dermatology, that the bare mention of it awakens profound respect and admiration. The professor has under his care the variola wards, one male and one female, containing in all forty beds; the secondary syphilis wards, with accommodations for forty patients; and the remaining four wards devoted to the various diseases of the skin. Hence we see the department for these disorders containing beds for two hundred, and these filled to a greater or less extent the year round. Professor Hebra himself examines each and all of the cases, devoting two or more hours every day to the wards, aided by his first assistant, Dr. Moritz Kohn, and other gentlemen, who carry out the various orders. Each ward has its nurses and corps of assistants, the male patients having male nurses, and the female, female, except in the variola wards, where all the nurses are female. At seven o'clock in the morning the professor meets his class of students in the amphitheatre adjoining the wards, and there delivers a clinical lecture upon the cases as they present themselves for inspection. Two wards are carefully examined each morning before the class, and lectured upon according to the importance of individual cases; if the patients are unable to appear in the amphitheatre, they are visited at the bedside. After the hospital patients are disposed of, dispensary cases are brought in: the name and a short history of each entered, an examination and diagnosis made, and the requisite prescription and advice given; if there happens to be an interesting case, the opportunity is seized for a lecture upon its leading features. In this way two hours or more are passed every morning in examining old and new cases, and in studying them as changes appear from time to time. Unless the case be an unsuitable one, he is sent from student to student for examination, the pupil being taught not only to recognize disease at a distance, but to become acquainted with its feel and near appearance. By taking two different wards each day, the six wards will be visited every third day, not including the variola wards, which are seen separately by the professor and such of the students as may desire to study this disease. This arrangement allows one to see the same cases twice a week, to follow their course and watch the result of the treatment. Exclusive of the above-mentioned examination, the first assistant, with his staff, makes a thorough visit to all the wards every day, and reports if there be anything amiss, or if any new cases of interest have entered. The patients brought into the General Receiving Ward are supplied with the clothing of the institution and conveyed at once to the Skin Department, where they are examined, then bathed or not, as the case may require, and placed under treatment. The whole material of these wards is at the disposition of the gentlemen who have been former first assistants of the department, for purposes of study and lecture, there being daily three or four lectures by these "Docents," as they are termed. The first assistant in this department is elected for a service of four years, and may be re-elected, according to the wishes of the directors. Drs. Auspitz, Neumann, and Kohn, names already well known in the dermatological world, fill the positions of Docents in this department; and, without their kind assistance and instruction, the young student of dermatology would become discouraged amid the mass of strange material he is about to study. In connection with the wards are the baths, which form such an important feature in the treatment of this class of diseases. They have a large building devoted to the purpose, and the arrangements are complete for furnishing any kind of bath that the case may require. And now to refer to some of the most important diseases of the skin as found in Austria. As before alluded to, it is a fact well known among dermatologists that diseases of the skin assume different characters and appearances in different countries,—heat, cold, the physical and moral condition having a decided influence upon the skin and its functions. The wards of the General Hospital of Vienna, which may be considered as typical of the dermatology of Germany, contain diseases of all kinds and grades, from the simple case of scabies to the most obstinate and malignant affections, including certain diseases more commonly met with in Vienna than elsewhere. One disease in particular appears to be almost confined to Austria and Southern Germany. I refer to the prurigo as described by Hebra in his work, and designate it the prurigo of Hebra, because it is not the prurigo of English or French writers, but a distinct disease, with well-marked symptoms, running a course emphatically its own, and totally unlike the diseases known in other countries as prurigo. In Vienna this affection is common, there being always from five to ten cases of it in the hospital at one time, whereas in London, among four thousand skin diseases, I did not see one case of the prurigo of Hebra. Several of the leading dermatologists of London informed me that they had never seen a case of prurigo as described by Hebra. At the St. Louis Hospital, in Paris, where in the course of three months I saw about six thousand patients, only two cases of the prurigo of Hebra appeared. One of them was shown to me by M. Hardy, who considers the disease under the head of strophulus, and calls it "*Strophulus prurigineux*." The other case presented itself in the clinic of M. Bazin, who believes the affection to be a scrofulous one, and designates it "*Scrofulide boutonneuse bénigne*." M. Hardy informed me that the disease was met with quite often in summer, but rarely in winter, and that it was very amenable to internal treatment, this being relied upon exclusively. This statement is totally at variance with the views of Hebra, who considers the disease as one of the most obstinate, and though tractable to a certain extent, yet positively incurable. The two cases I saw were undoubtedly the prurigo of Hebra, though light and of a different grade from those met with in Vienna. Why this disease should make such ravages in Austria, be so rare and mild in France, and altogether wanting in England, is one of those enigmas which at present baffles every attempt at solution. Here I can merely touch upon this interesting disease; but the subject is open for investigation, and is one worthy of study. A disease very commonly met with in Austria is lupus, which shows itself in all its forms. I remember, in the winter of 1868, counting thirty-five cases in the department at one time. This affection runs a more virulent and obstinate course here than in France or England. Nowhere else in the world can such terrible cases of lupus be seen as in Vienna; and the treatment is correspondingly severe, the French mode of management having no effect whatever. Cases of scabies are always presenting themselves in numbers, and many of them of long standing, and accompanied by a great amount of eczema. Eczema, uncomplicated, in all its forms,

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is always to be found in abundance here, as in other countries. Psoriasis, though very common in Germany, does not exist to such an extent as in England, there being perhaps, on an average, but six or eight cases in the wards at one time. Diseases of vegetable parasitic origin are comparatively rare in Vienna. During a stay of more than a year in the hospital, I saw only four or five cases of favus; in Paris, as many might be seen in the course of a few weeks. The other parasitic diseases, tinea tonsurans, circinata, and versicolor, occur much oftener. Parasitic sycosis very rarely occurs in Vienna,—so rarely, indeed, that for a long time its parasitic nature was denied in this city; yet in Paris this is one of the most frequent of the parasitic diseases. Lichen scrofulosorum appears at the hospital now and then, perhaps in the ratio of a dozen cases or more through the year. Of lichen ruber, throughout the year only three cases applied at the department. Not long since, through the kindness of Dr. Tilbury Fox, I had the pleasure of seeing a case of this rare disease in London. Pemphigus is also a rare disease in Vienna; though I am not prepared to say that it is more so than elsewhere. Purpura, ichthyosis, alopecia areata, zoster, acne, and the numerous other diseases are all found in about the same ratio as in other countries. At certain seasons of the year, variola is rife and the wards are full; but the disease is so thoroughly understood, and the treatment so judicious, that the mortality in the department reaches only the incredibly small figure of three per cent. Concerning the treatment of these diseases, and the various methods pursued in the three great medical arenas of Europe, many interesting facts might be stated; these, however, must be reserved for a future occasion.

OBITUARIES.

Dr. Augustus Waller, F.R.S., died at Geneva, Switzerland, September 18. He was well known as an experimental physiologist, and especially by his contributions to the physiology of the nervous system. For his valuable researches he twice received the Monthyon Prize of the French Academy of Sciences, and, in 1860, the Royal Society's gold medal. He was at one time professor of physiology in Queen's College, Birmingham.

John Bacot, the senior Fellow of the Royal College of Surgeons of England, of which he had been nearly seventy years a member, died recently, in England, at the age of ninety. He was formerly one of the editors of the *Medical and Physical Journal*, and was prominent at all times in the medical benevolent societies of Great Britain. He was inspector of anatomy for London for many years, and left a son in the profession, who had himself recently retired, as honorary deputy inspector-general of hospitals, after twenty-six years' service.

REVIEWS AND BOOK NOTICES.

Practical Anatomy: A Manual of Dissections. By Christopher Heath, F.R.C.S.E. First American, from the Second English Edition. Edited by W. W. Keen, M.D. 8vo. H. C. Lea, Philadelphia, 1870.

This manual differs from others of its kind in a somewhat extended preliminary note to each of its sections, as well as in its descriptions of external surfaces. Surgical teachings are here and there introduced; but, with the exception of those pertaining to the perineum and groin, they are scarcely satisfactory. Many of the figures are retained from the time-honored "Wilson." Among those gleaned from other sources may be mentioned the designs of Messrs. J. T. Gray and G. E. Pearse, as well as the admirable transverse sections modified from Béraud.

The editor's work has been well performed. Not content with simply correcting the proof-sheets,—a style of work too much in vogue among us,—Dr. Keen has shown his desire to adapt the work to the needs of the American student by adding valuable parenthetic notes to almost every page. Many of these are necessarily brief, and are so arranged as not to interrupt the language of the author. The editor's more extended contributions are seen to the best advantage in his remarks on hernia, on the cervical triangles, on the action of the palmar interossei muscles, according to Duchenne, and in an account of the dissection of the eye. The alterations from the original in the arrangement of the chapters are confined to the removal of the sections on the groin and perineum from Part II. to Part III., where they are included under the anatomy of the leg. This is done for the sake of convenience, since, as we are informed, "they are usually dissected with this part, and previous to the dissection of the leg itself."

Kritik der parasitologischen Untersuchungen von Hallier, Zürn und Keber, mit besondere Bezugnahme auf den Typhus abdominalis und exanthematicus, und auf die Pocken und die Revaccination. Von Dr. Rudolf Weise. (A Critique upon the Parasitical Investigations of Hallier, Zürn, and Keber, with Especial Relation to Typhus and Typhoid Fevers, Smallpox, and Revaccination. By Rudolf Weise.)

This pamphlet is especially interesting as confirming the results of Dr. Billings' (U.S.A.) investigations into the reliability of Prof. Hallier's method of research and the truth of his results.

Dr. Weise is even more explicit in his statements than our Washington authority, declaring that he has found Prof. Hallier's work to be "one mass of errors." Dr. W. worked at the bedside day after day, studying all the secretions, the blood, the lymph of pustules, etc., and receiving from all the same answer,—that they contained no cryptogamic growth. Nor was this from want of a sufficiently high power; for he used a No. 10 Hartnach's immersion lens. In his introductory chapter, speaking of the importance attached by some to the possession of a $\frac{1}{25}$ or $\frac{1}{50}$, Dr. W. uses a sentence which, it seems to us, cannot be too strongly impressed upon the mind of the worker. It is, "Not the possession of the most costly microscope, but the method of its use, determines the value of an investigation;" or, as the naturalist Forbes long ago remarked, speaking of the very poor instrument with which his own earlier work was done, "It is not the object-glass at one end, but the head at the other, that constitutes the value of the microscope."

In this connection, it is desirable to put upon record the results obtained at the Surgeon-General's office, Washington, in repeating the experiments of Dr. Joseph G. Richardson, in which he claims to have demonstrated the passage of bacteria and vibrios from the stomach into the blood. It will be remembered that his method was examination of the blood before and after ingestion of putrid beef-juice.

These experiments were repeated in precisely his manner, under the supervision of Dr. Woodward, so often and so carefully, and gave so uniformly negative results, that there can be but little doubt that there was some fallacy in those of Dr. R., and that vibrios do not appear in the blood after the ingestion of matters loaded with them.

In his study of vaccination Dr. Weise arrives at a conclusion which, if true, seems of great practical importance,—namely, that when vaccine lymph is dissolved in glycerine it is much more active, and may be used in smaller quantities with much more certainty, than when in its natural state. His explanation is that in such solution its virtues are unimpaired, and its persistent fluidity gives it much readier entrance into the blood.

A Treatise on Medical Electricity, Theoretical and Practical, and its Uses in the Treatment of Paralysis, Neuralgia, and other Diseases. By Julius Althaus, M.D.

This work appears in a second edition, after an interval of ten years, nearly double the original size, and materially improved. During this period important advances have been

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made in the study and development of electro-physiology and therapeutics, and considerable attention has been given to the perfection of the various forms of apparatus used. The limited field of its early application has extended until it claims the daily attention of both the physician and surgeon. Many points of uncertainty have been cleared up, and a definite value has been given to the different kinds of electricity in a large number of diseases. Dr. Althaus presents these clearly and acceptably, in five chapters of nearly seven hundred pages. The first chapter introduces a history of static, dynamic, and animal electricities, the means of producing, and the laws governing them. In the electro-physiology of the second chapter, under the different modifications of form, quantity, and intensity of the current, we have the effects resulting from its application to the brain, spinal cord, sentient nerves, organs of special sense, motor nerves and muscles, mixed nerves, blood, skin, and bones. In the third chapter are given the different forms of batteries and instruments most practicable and desirable for the production of the continuous and induced currents, with directions for their general and special application, both surgically and medically. The fourth chapter relates to the value of the various forms of the current as a means of diagnosis in the lesions of the nervous and muscular systems; while the fifth chapter, which occupies over one-third of the book, is devoted to the consideration of the important subject of electro-therapeutics, where, in addition to the treatment of the general diseases of the nervous system, we have contributions to the treatment of the organs of circulation; the respiratory, digestive, and urinary organs; the male and female organs of generation; tumors, wounds, and ulcers; the introduction of drugs into, and the extraction of metals from, the system by means of electricity; and, finally, the use of electricity in midwifery. The book is well illustrated with a number of engravings, representing the numerous forms of batteries, induction apparatus, and electrodes. The value of the book is further enhanced by the clinical histories which are given, illustrative of the efficiency of electricity, its aid in diagnosis, and the method of applying it.

We have received the first number of the *Photographic Review of Medicine and Surgery*, published in this city by Messrs. J. B. Lippincott & Co., under the editorial management of Drs. Maury and Duhring. It contains four cases of great rarity and interest, each of which is accompanied by a full-page photographic illustration. The letter-press is executed in excellent style, and the photographs might serve as models of the varied applicability and great perfection of this mode of illustration. We cordially congratulate the editors upon the highly attractive appearance of their new journal.

GLEANINGS FROM OUR EXCHANGES.

Pseudo-hypertrophic Paralysis.—Dr. D. Dyce Brown (*Edinb. Med. Jour.*, June, 1870, p. 1079) furnishes an important contribution to the clinical history of this curious affection. It was first accurately described by Duchenne, in 1861, and since then cases have been recorded in France, Germany, and England. The peculiar features of the disease are:

1. A stage of general feebleness and weakness of the lower limbs.

2. A peculiar gait of side-to-side waddling, with unnatural separation of the limbs in walking, for the purpose of obtaining secure equilibrium.

3. A deep anterior curvature in the lumbo-sacral region when in the upright position, due to paralysis of the extensor spinal muscles.

4. A state approaching that of talipes equinus, with clawed nails, owing to the greater degree of paralysis of the flexor muscles of the foot.

5. Marked enlargement of the affected limbs, with apparent hypertrophy of the muscles. In some cases, however, some of the affected muscles waste and undergo extreme atrophy.

6. A stage when the symptoms remain stationary.

7. A final stage, in which the paralysis becomes general over the body, increasing progressively in degree, the patient ending by being unable to move himself off his couch, and generally dying from some intercurrent disease.

As yet our knowledge of the changes of the internal organs, and specially of the nervous system, is purely negative, and limited to a single autopsy. Duchenne is disposed to place the seat of disease in the sympathetic nerves, though no lesion of them has yet been found. The changes in the paralyzed muscles have, however, been carefully studied by removing small pieces of them during life, by means of Duchenne's trochar,—the "emporte-pièce histologique." The apparent hypertrophy of the muscles is due to an excessive increase of the interstitial connective tissue, attended with a considerable formation of fibres with fine undulations (probably empty sarcolemmata), and of adipose tissue. The muscular fibres themselves are pale, reduced in number and size, and have lost, to a greater or less extent, their transverse striation.

In all of the cases previously recorded, the disease has made its appearance during childhood; but in Dr. Brown's case the age of the patient at the commencement of the disease was 26 years. He had been a book-hawker, and quite healthy until the end of April, 1869. The first symptoms complained of were stiffness of the legs in walking, with pains in the thighs. Weakness of the legs progressed, but no enlargement of the thighs was noted till July, 1869, a little over two months after the first symptoms. Three weeks later the calves of the legs had followed in the same enlargement. The legs were very firm and hard, but there was marked loss of power, and he walked with the characteristic waddling gait, with the legs widely separated. The glutei muscles subsequently became affected. The oblique abdominal muscles were also visibly enlarged. In September the arms became affected; but, while the biceps apparently enlarged, the muscles of the forearm and hand wasted. The muscles of the back were not affected. The pain in the legs subsided. There were no cerebral symptoms, though he looked heavy and stupid; no spinal pain or tenderness; no anæsthesia; no increased difficulty in walking with eyes shut. There was no difficulty in urination, and the action of the bowels was regular. In January, 1870, his condition was much the same, with some increase of enlargement and weakness of the affected muscles, and weakness of sight, especially of right eye. During the progress of the observation he gained five pounds in weight (157 to 162). At this time he passed from under observation.

Contagiousness of Tuberculosis. Klebs (*Virchow's Archives*, Jan. 1870). Bernhard (*Centralblatt*, April, 1870).—Prof. Klebs gives a brief résumé of his experiments on animals with regard to the contagiousness of tuberculosis:

1. The "tubercle-virus" is soluble in water, but by evaporation the watery solution is freed from its noxious properties. A fresh alcoholic precipitate, however, contains the infectious material, which, after injection into the peritoneal cavity of guinea-pigs, is absorbed by the lymphatics, and produces an eruption of miliary tubercle.

2. The fact demonstrated by Chauveau, that tuberculosis is caused by feeding cattle on tubercular matter originating in other cattle, is extended by the observation that it is as surely developed if the tubercular material is derived from the human subject. Klebs thinks that on account of the possibility—nay, probability—of the transmission of tuberculosis from cattle to mankind, it is advisable to keep under close observation those animals affected with tubercle. He promises to communicate shortly his investigations concerning the transmission of tuberculosis by the milk of diseased cattle.

Bernhard fed rabbits for months on tubercular lungs, pus which had undergone cheesy degeneration, etc., but in no instance did tuberculosis develop. Subsequently there was an epidemic of enteritis, when, on examining the animals which died, the characteristic alterations of enteritis were found; but, in addition, the lymphatics were filled with a white, fatty, granular detritus, and the glands were enlarged and in spots had undergone cheesy degeneration. In one rabbit, which had never been used for the experiments, but which died from the epidemic enteritis, there was a beautiful eruption of miliary tubercle, which presented the typical miliary, pearl-colored, semi-transparent nodules. Tubercles were also found in the spleen.

In these experiments, therefore, the ingestion of tubercu-

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lous material did not produce tuberculosis, while the scrofulous degeneration of the mesenteric glands subsequent to an attack of enteritis was followed, in one case, by an eruption of tubercle.

These experiments, taken with those of Kösler and Ruge, who have demonstrated the frequency of the so-called "spontaneous tuberculosis" in the rabbit, dependent only upon adverse hygienic and dietetic conditions, makes it evident that this animal should not be employed in experiments having for their object the study of the origin and contagiousness of tuberculosis.

Scarlatinous Nephritis.—Dr. Baginsky (*Centralblatt*, July, 1870) has made numerous experiments on rabbits, to explain the occurrence of nephritis after scarlet fever. He suppressed the function of the skin, either by painting it over with varnish or by exciting a dermatitis by the use of croton oil. He is led to conclude that extensive inflammation of the cutis results in parenchymatous and interstitial nephritis. Thus, he thinks, many cases of scarlatinous nephritis must be ascribed, not directly to the blood-poison, but to the accompanying dermatitis.

Treatment of Scarlet Fever and Scarlatinous Dropsy by Baths. Piltz (*Jahrb. für Kinderheilkunde*).—In twelve severe cases of scarlet fever, complicated with diphtheria, the cold-water bath was employed whenever the temperature of the child reached from 38·5° C. to 39·5° C. The temperature of the bath was 25° C., and the time of immersion varied from eight to ten minutes, the bath being repeated, in some cases, every hour. Of these cases five died, while seven recovered; while in no case did dropsy supervene. Cases of scarlatinous dropsy were treated according to Liebermeister's suggestion, by warm baths, the temperature of which was gradually raised from 38° to 40° C. The child was kept in the bath half an hour, and copious diaphoresis kept up for two hours. The result was very satisfactory, the transudation being gradually and progressively absorbed without other medication.

On Quinine and Alcohol in Paralytic Fever (*Practitioner*, July, 1870).—In this paper Dr. C. Binz gives the results of his endeavors to trace the method in which these drugs reduce the temperature in fever. He reasons that the cause of heat-increase, observed by Brodie, etc., after division of the spinal marrow, is the separation of the body from a controlling inhibitory heat-centre which he believes exists in the brain. On giving quinine and alcohol to dogs with their spinal marrows divided, in full but not toxic doses, he found that the temperature was decreased, and therefore reasons that these drugs do not act upon the inhibitory heat-centres. Again, it is well known that in certain cases an increase of temperature occurs after death, and, according to Dr. B., quinine and alcohol both prevent this; and from this he argues that they both reduce temperature by checking the chemical activities of the tissues.

In the *Pacific Medical and Surgical Journal* for June, Dr. W. E. Whitehead commends the use of large doses of ipecac. (grs. viii–xv t. d.) in the treatment of chronic dysentery.

In an interesting paper in the *Practitioner*, on wines, the editor and staff arrive at the following conclusions:

Sound natural wines are to be obtained most economically from the Bordeaux districts, the red wines being the best.

Rhine wines (white) are equally good, but more expensive.

Hungarian and Greek wines are often very good, but unequal, from defects of manufacture, and too expensive.

The fortified wines (*i.e.* those to which alcohol is added during manufacture) develop no proper qualities till they have been some years in bottle. Sherry is, however, greatly superior to the other wines of this class, in the rapidity with which it develops the volatile ethers, upon which much of the value of wines depends. Sherry is the appropriate stimulus of the enfeebled nervous system of old age, as well as of certain kinds of infantile and youthful debility. Children who are especially benefited by the habitual use of wine are—1. those in whom a tendency to wasting is very marked, *i.e.* those who, *without positively* seeming ill, are very apt to run down suddenly in flesh, with or without loss of appetite; 2. those who readily contract catarrhal affections, which are very slowly shaken off. The best way of administration is in combination with a simple bitter at a fixed time of day. Thus, a child three or four years old may take a teaspoonful of sherry, made up to a tablespoonful with infusion of gentian, three times a day.

Uterine Hemorrhage arrested by Heat to the Spine.—Professor Beneke, of Marburg (*Medical Mirror*, from *Medical Record*), has arrested hemorrhage from the uterus, in several cases, by the application of heat to the spine. He thinks much can and will be done by the principle of applying cold and heat to the spine. So far as the heat is concerned, his experience has fully convinced him of its extreme usefulness in certain cases.

Vomiting in Pregnancy.—Dr. Carl Both (*Boston Jour. of the Gynæc. Society*) highly recommends, in this troublesome complaint, raw meat chopped up very fine and slightly salted. The doses should be small at first, and then gradually increased.

A Child Born without an Occipital Bone.—Dr. Cuthbert, who relates this case, states (*Edinb. Med. Jour.*, March, 1870) that there was great difficulty in making out the presentation, and it was at first supposed to be a breech case. The speedy termination of the labor soon cleared up all doubt. There was complete absence of the occipital bone, and in its place a large bulging tumor, the spine ending abruptly. The child lived until the eleventh day, dying in convulsions; it could not nurse, owing to a partial anchylosis of the jaw to the temporal bone.

Cæsarean Section after Death; Child Saved.—Dr. Beckman has published (*Lancet*, July 16, 1870) the case of a woman who, in the eighth month of pregnancy, died of apoplexy. The Cæsarean section was performed within five minutes after the mother's death, and a male child, weighing four pounds, extracted. It was apparently dead; but, by dint of persevering efforts at artificial respiration, life was recalled, and the boy is now three years old. A similar case has been reported by Dr. Ploss.

Prevention of Scarlet Fever.—Dr. Searcy believes (*Trans. Tennessee Med. Society*, 1869) that the tonsils are the medium through which the system is contaminated by scarlet fever. He contends that he has aborted attacks or mitigated the violence of this disease by swabbing the throat twice daily for several days with a solution of nit. argent., in the proportion of one drachm to one ounce of water. This must be done so soon as the first symptoms of the disease appear.

Mechanism of Labor.—Dr. W. L. Kueneke, Director of the Lying-in and Midwives' Training School at Celle, has been singularly fortunate in discovering the "Four Factors of Labor." The simplicity of the first factor is so striking that we quote it entire from the May number of the *Edinburgh Medical Journal*. "Kueneke's first factor is the mechanical proceedings of labor. It includes the attitude and position of the fœtus, changes in position, mechanism of vertex cases, describing a *synclitic* movement and *cyrtophoric* progression, a *peristrophic*, or *turbinal*, or *rotative* movement, an *enclitic* movement, a *proclitic* movement, and a *cataclitic* movement"! Strengthened by this knowledge, we shall proceed to attend our next case of confinement with much greater confidence.

MISCELLANY.

The "Welsh Fasting-Girl."—We clip the following from the *British Medical Journal* for June 25, 1870:

"A return just made to the House of Commons as to the costs of the prosecution of the inquiry into the death of Sarah Jacobs, the Welsh fasting-girl, shows the expense, up to the present time, to have been no less than £378 12*s.* 4*d.*, of which sum Dr. Robert Fowler, physician and expert, claims £193 8*s.* 6*d.* Altogether, therefore, this was a physiological experiment—or imposture, as one may please to call it—of a costly character. If the child had needed, during life,

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the sums thus expended, it would certainly have been very difficult to obtain them. It was an unsatisfactory and painful incident throughout, and this is by no means an agreeable souvenir of it."

The same journal, in its issue for July 16, says,

"A true bill has been returned against the father and mother of the Welsh fasting-girl."

SUITS AGAINST PHYSICIANS.—It seems as if there were an epidemic influence prevailing just now, by reason of which these suits are unusually frequent. So far, the profession has maintained its ground, as in the case lately decided in favor of Dr. Sayre, in New York, and another in this city, in which the jury, without leaving the box, pronounced for Dr. Reese, the defendant. But last year a jury brought in a verdict so manifestly unjust, against Dr. Hall, that it was at once set aside by the judge (Stroud). These suits involve a great deal of annoyance and loss of time, not only to the gentlemen who are thus attacked, but to their friends who are called upon to testify. Nevertheless, it behooves us to resist such attempts at levying blackmail upon us (for trials of this kind are usually nothing more), and to aid one another cheerfully, since no one knows when his own turn may come. To buy off a prosecutor would be to inflict an injury upon the whole profession.

IN Wilkie Collins' last novel, "Man and Wife," he makes an attack upon the "training" system. One of the leading characters in the story, an athlete, becomes an epileptic by reason of overtraining; and an astute surgeon is introduced, who detects and predicts the coming mischief. Unless the gifted author of the story should assure us that the set of incidents was founded on facts actually observed by him, we should be inclined to regard the picture as overdrawn, and, therefore, as likely to defeat its own object.

AN "eclectic" school of medicine in this country recently had the impudence to confer the honorary degree of M.D. upon Dr. J. Matthews Duncan, the distinguished obstetrician of Edinburgh. Unfortunately, the matter got into the medical journals before Dr. D. had learned (if, indeed, he inquired into) the character of the institution; and one object of the quacks is, therefore, accomplished.

ONE long-felt want in this city is now about to be supplied. A morgue is in process of erection, at the corner of Front and Noble Streets, under the superintendence of the commissioner of city property.

ON one day in each week a lecture is delivered to female medical students in the wards or amphitheatre of the Pennsylvania Hospital. We believe the cases for illustration are derived from the women's wards only.

DECAPITATION BY HANGING.—At a recent execution in Edinburgh, the experiment was tried of producing instantaneous death by means of a fall, or "drop," of 14 feet, the idea being that fracture of the cervical vertebræ would be caused. The man did, indeed, die instantly, for his head was actually severed from his body. A rope-maker gave the explanation of this singular and frightful phenomenon, which was that the rope used was absolutely unyielding, so that the momentum acquired by the victim's body brought the tissues of the neck against an obstacle like a blunt knife. It was, in fact, an *écrasement* of the head, the écraseur acting with a force and rapidity scarcely to be estimated.

Something similar used to be related in stories of whaling voyages, where the line, in running out, would sometimes entangle the leg or arm of a sailor and instantly sever it from his body.

DEATHS OF DISTINGUISHED PHYSICIANS.—To the long list of "the majority" must be added the names of Sir James Clark, who, nearly forty years ago, was unjustly blamed for his honorable course in the case of Lady Flora Hastings; Dr. James Copland, author of the "Cyclopædia of Practical Medicine;" and Dr. Gunning S. Bedford, a distinguished New York obstetrician.

DR. WILLIAM T. LUSK, of New York, has removed to Boston, to take a lectureship on physiology in Harvard University.

DR. JAMES CUMMING lately brought before the Obstetrical Society of Edinburgh some observations with a view to establishing a stethoscopic test of the sex of the fœtus in utero. His idea was that the pulsations of the heart in unborn males were distinguishably less frequent than in females. But the exceptions to the rule were so marked as to make it practically valueless in any given case.

THE WAR IN EUROPE.—Only very meagre items reach us as yet in regard to the surgical aspects of this great contest. The number of killed and wounded has certainly been fearful. It would seem as if, under certain circumstances, the *mitrailleuse* had proved itself to be a very effectual weapon. It is a modification of what is known in this country as "the Gatling gun." So rapid has been the succession of severe battles, and so great the actual work thrown upon the surgeons of both the contending armies, that it may well be doubted whether we shall ever have their experience put together in an authentic and well-digested form.

MATTER OF FACT.—We copy the following paragraph, *verbatim et literatim*, from the London *Medical Press and Circular* for May 4, 1870:

"*The Boston Medical and Surgical Journal* contains an article 'On the Surgical Lessons of the Late War,' by Dr. Asterisk, who praises very highly a preparation of the portentous name of ichthyocollac preparatæ Spaldingii. This remedy is recommended in cases of alopeciæ, of nervous prostration internally, as a dressing for wounds, etc. etc. There seems to us to be far too many of such preparations in the American practice of medicine."

"Spalding's Prepared Glue" was made the subject, a year or two since, of a burlesque article, by a well-known surgeon in the United States army. At the suggestion of a friend, he sent it to the journal named in the above quotation, in which, to his surprise, it appeared. We hope he will laugh as heartily as we have over the excellent ethics, but stupidity, bad grammar, and bad spelling, of his British commentator.

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending Oct. 8.	Oct. 15.
Diseases of the Brain and Nervous System	37	37
Diseases of the Organs of Circulation and Respiration	78	77
Diseases of the Abdominal Organs	27	37
Zymotic Diseases	11	13
Constitutional Diseases	17	3
Casualties	9	7
Stillborn	11	12
Unclassified	41	38
Unknown	0	5
Adults	118	114
Minors	113	115
Totals	231	229

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TUESDAY, NOVEMBER 15, 1870.

ORIGINAL LECTURES.

CLINICAL LECTURES

ON THE TREATMENT OF STRANGULATED HERNIA.

BY S. D. GROSS, M.D., LL.D.,
Professor of Surgery in the Jefferson Medical College of Philadelphia.

No. II.

IN the preceding lecture I spoke of the treatment of acute strangulation, pointing out the importance of prompt and decisive action. My object, this morning, will be to call attention to another form of the affection, and also to the use of the knife in the event of the failure of the taxis or of its inapplicability.

When strangulation takes place slowly, or when it is, so to speak, chronic, the case generally admits of much greater delay, as well as much greater liberty in the manipulations necessary to effect reduction. In such a condition, a number of hours—twelve, twenty-four, or even thirty-six—often elapse before the supervention of severe or alarming symptoms. The patient, perhaps long accustomed to his rupture, is conscious of his inability to replace it, but, having, it may be, repeatedly been in an apparently similar condition, gives himself no special concern upon the subject. Meanwhile the strangulation continues; slowly, but steadily, the tumor augments in bulk and tension; tenderness gradually arises; the abdomen becomes sore; the bowels are constipated; occasional nausea is experienced; and, finally, vomiting ensues, followed, after no long interval, by the ejection of stercoraceous matter. The nature of the disease, hitherto obscure, has now fully declared itself. The symptoms are no longer equivocal. Life is in danger; although the danger is not so pressing as in acute, rapid, or sudden strangulation. There is still time for the taxis, and the efforts, if judiciously and perseveringly made, will be likely to be successful. The hernial contents are constricted, but hardly so tightly as in acute strangulation; the tumor is tense and firm, but the opening of communication is large, and pressure, steadily and systematically exerted, readily displaces some of its contents. First one portion is emptied, then another, and another, until the whole of the swelling is gone. The operation has been a comparatively easy one. Of course, there are exceptions to the rule. I have often, under such circumstances, effected reduction in a few minutes,—sometimes, indeed, in a few seconds. But a surgeon is not always thus fortunate. The case is sometimes stubborn, requiring coaxing, patience, and perseverance; and, in this way, I have sometimes spent from ten to fifteen minutes without any detriment to part or system. If the symptoms are not urgent, if the stomach be comparatively quiet, if there be no special restlessness, hiccough, or shrinking of the features, if the tumor be not particularly tender, or evincive of the existence of inflammation, further delay will be advisable, and the taxis may be again tried, the system, in the mean time, having had the benefit of a full dose of morphia and chloral. It is astonishing how tolerant of delay, and even of rude manipulation, many of these cases of so-called chronic strangulation are. Nevertheless, there is a point here, as in the acute form of the affection, when further delay becomes improper, and instrumental interference is imperatively called for. A decided aggravation of the symptoms just enumerated unmistakably indicates that the time for the suspension of the taxis has arrived, and that life can be saved only by the prompt division of the stricture. It may be assumed—judging from my own experience—as a general principle that the facility of reduction in gradual or chronic strangulation is in proportion to the volume of the tumor, supposing that it is free from complications, particularly from adhesions and enlargement from interstitial deposits of the protruded structures. Great size always denotes the existence of a large opening of communication between the hernia and the general peritoneal cavity; and, as has already been stated, such an opening is uniformly conducive to facility of restoration, by admitting of the easy clearance of the contents of the bowel.

The symptoms of strangulation usually disappear immediately after the reduction has been effected, or, at all events, within a very short period. Sometimes, however, a certain degree of nausea continues, and occasionally there is even some vomiting. Such symptoms are most liable to ensue in cases attended with extraordinary gastric derangement, and they generally yield promptly to the effervescent draught, a full dose of chloral, or the hypodermic injection of one-fourth of a grain of morphia. When they obstinately persist, apprehension may justly be excited that the strangulation has not been completely relieved, but that the parts are still more or less constricted. The cause of the obstruction, which should at once be sought out, may exist either in the sac itself or in the wall of the abdomen, the bowel, it may be, having been pushed, during the manipulations, underneath the peritoneum or between this membrane and the transverse muscle. However this may be, an effort should at once be made to reproduce the hernia, an object which is best attained by making the patient cough and strain in the erect or semi-erect posture. If the effort fails, the only thing that remains to be done is to cut down upon the parts and relieve the stricture with the knife. Such an occurrence, however, is uncommon, and will not be likely to arise unless undue force has been used in the employment of the taxis.

Although there are, in my opinion, few cases of strangulated hernia in which the timely and judicious employment of the taxis will fail to effect reduction, it is impossible to dispense with the use of the knife altogether. The cases demanding instrumental interference are: 1. those in which there has been a failure of the taxis and its auxiliaries; and 2. those in which the parts, from neglect and from the severity of the constriction, are so much inflamed as to render the employment of pressure, however slight, utterly intolerable. It not unfrequently happens, not only in hospital but also in private practice, that the proper time for the taxis has passed. The professional attendant has mistaken the nature of the affection, or the patient, although informed of his danger, has made light of the case, having perhaps flattered himself that by-and-by the tumor would recede of its own accord, and that he would thus escape operative interference. Such examples are of sufficiently common occurrence among the poorer classes of people, who often find it difficult to command proper surgical aid, or who, from sheer ignorance and obstinacy, are opposed to the employment of the means so necessary for their relief. Hence, when the case is seen for the first time, the employment of the taxis is utterly out of the question; nay, it may be that even the use of the knife hardly affords any chance of success. The tumor is exquisitely tender, highly inflamed, and intolerant of the slightest manipulation; the abdomen is sore and tympanitic; the pulse is corded and very frequent; the extremities are either cold or beginning to be cold; the thirst and restlessness are excessive; and there is constant nausea, with frequent vomiting of stercoraceous matter. Obviously,

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such a case is unfit for the employment of the taxis. If, with the aid of chloroform, the surgeon should be so rash as to use pressure, the result might—indeed, probably would—be most disastrous. The bowel would either be ruptured, or there would be such an increase of inflammation as would, in all likelihood, speedily destroy the patient.

There must evidently, then, be a distinction drawn between cases that admit and cases that do not admit of the employment of the taxis. Men whose experience is based mainly upon hospital practice boldly assert that the proper treatment, as a general rule, in strangulated hernia consists, not in the application of the taxis, but in the use of the knife. That this practice, as applied to such cases, is the correct practice, no one who knows anything of the nature of this form of strangulation would for one moment gainsay. Nothing else will answer; nay, even this often fails under such circumstances,—not because of the operation, but because of the hopeless condition of the part and system. But such cases are not cases for the establishment of broad, general principles; they should not be brought forward as arguments against the employment of the taxis. The taxis has its time, and, therefore, also its value; when that time is passed, then, but not until then, if the surgeon have his choice, does the knife take its place.

The knife, like the taxis, is not always employed sufficiently early: precious time may have been lost through ignorance of the surgeon, or through neglect, obstinacy, or false expectation of the patient, and when, at length, the tumor is opened, the protruded structures are perhaps gangrenous, or the system has been irrecoverably exhausted. Such cases, of course, greatly increase the death-rate of herniotomy.

The operation for the relief of strangulated hernia is generally very simple. Such, at all events, is the result of my own experience; and yet, it is proper to add, the young surgeon seldom attempts it without a considerable degree of apprehension lest he should commit some error in its performance. He has not forgotten the teachings of the dissecting-room, or the eloquence and force with which his surgical professor expatiated upon the various layers which enter into the composition of the tumor, the proper hernial sac, the seat of the stricture, and the proper method of returning the protruded structures. All these things start up before him, like so many hobgoblins, to frighten and bewilder him. They produce an impression not unlike that which is made upon the nerves of the young obstetrician by a breech presentation. All this is perfectly natural. It is one of the fruits of his education; and some experience is necessary before he can entirely shake it off. As he grows older and wiser, he forgets his anatomy and confides more and more in his grooved director. He knows that every rupture has a certain amount of covering, and that this covering has to be carefully divided before he can reach the dislocated bowel, or bowel and omentum. The minuteness with which the different layers of hernia have been described, and the stress that has been laid upon the importance of their discrimination in the use of the knife, have been productive of an immense amount of harm in an operative point of view; or, in other and more comprehensive language, they have had the effect of investing the subject with false notions of its magnitude and dangers, and thus depriving it of the simplicity which really characterizes it. I must not be misunderstood. My remarks have reference merely to the more ordinary forms of strangulated hernia, and not to those complicated cases which must every now and then arise in hospital and large private practice, and which are well calculated, by their peculiar character, to embarrass and perplex the most experienced and skilful operator.

The same preliminaries are necessary in the use of the knife as in the employment of the taxis; that is, the bladder and rectum should be sufficiently empty, the abdominal muscles well relaxed, and the patient thoroughly anæsthetized. A scalpel, grooved director, pair of forceps, and probe-pointed bistoury constitute the chief instruments. Simplicity here, as elsewhere, is the perfection of the operation. The hair being shaved off, a fold of skin is raised by the surgeon and his assistant over the most prominent portion of the tumor, and divided from within outwards by one sweep of the knife. The grooved director, somewhat sharp at the extremity, is now thrust into the subcutaneous cellular tissue, which is next freely divided; and thus the operation is proceeded with, layer after layer being successively penetrated, until the proper hernial sac is brought fairly and fully into view. Thus far everything is perfectly simple, the grooved director leading the way, and so serving as a secure and reliable guide to the knife. No sensible surgeon stops to count the different layers of a hernia, as described in the books and taught in the lecture-room. Proceeding in the manner here indicated, he is sure to go right, whether there be, as occasionally happens, only one covering besides the skin, or a considerable number of them, as when the hernia is old and bulky.

The proper hernial sac is always sought for with unusual care and solicitude. It is one of the great points in the operation. Its appearance under the knife is not always the same. In recent cases, with a moderate amount of strangulation, it often presents itself as a white bladder, of variable size and shape; but when the reverse is true—that is, when the stricture is uncommonly tight—it is generally of a purple, brownish, or claret color, and the seat of more or less vascularity, the vessels being, perhaps, distended to the very utmost. In case of long-standing hernia the sac is often much thickened, opaque, wrinkled, and remarkably firm. To satisfy himself that he is fairly down upon the sac, the surgeon pinches up a portion of it, and, rubbing it between his thumb and index-finger, to ascertain that he has not got hold of the bowel or bowel and omentum, he pierces it with the point of his knife, or, if he is in any doubt, with an exploring needle. The moment this is done, there is an escape of thin fluid, generally somewhat of a darkish cast, not unlike coffee-ground, but sometimes clear and limpid, like the purest spring-water, and at once indicative of the precise situation of affairs. The quantity of fluid varies from a few drops to an ounce or more. Commonly it does not exceed a drachm or a drachm and a half. Into the opening thus made the grooved director is now inserted, and the sac slit up and down to the requisite extent. The protruded structures being thus thoroughly exposed, the next thing to be done is to seek and divide the stricture, the great object of the operation. The proper way to effect this is to introduce the index-finger into the sac, insinuating it between the protruding structures and the point of resistance, pushing the finger well under it. Keeping the finger in this position, a probe-pointed bistoury is placed flatwise upon its palmar surface and passed on until it is well under the stricture, which is then divided by a kind of sawing motion, by turning the knife with its back towards the bowel. A short incision, not exceeding the sixth of an inch, generally suffices to liberate the parts. Another step has now been taken. The next is to return the parts, supposing that they are—which, however, is by no means always the case—in a fit condition. To do this to the best advantage, they must, as a preliminary measure, be drawn gently away from the seat of the obstruction, and then carefully replaced, bowel first, and next omentum, both being followed by the finger, that they may be carefully spread out in the cavity of the abdo-

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men. This is a point of great moment in the procedure. The surgeon should never be satisfied unless he is certain that he has put the parts in their natural situation. If the symptoms of strangulation continue, it is an evidence that the reduction has been imperfectly effected, that the stricture has been only partially divided, or that the parts have been pushed behind the peritoneum and transverse fascia. In a word, the work is not finished. Search is again made for points of resistance, and the knife, if need be, again used. If no stricture be found, the cause of the obstruction may be a twisted condition of the bowel or bowel and omentum, or the stricture may be in the protruded structures, or the protruded structures may be imprisoned, as just stated, in the wall of the abdomen. In the latter case, the patient makes forcible efforts at coughing, or, what is better, the finger brings down the parts, and then pushes them more securely in place.

Finally, reduction having been effected, the wound is carefully closed with several points of the interrupted suture, supported by a compress and a roller carried round the hips and the thigh on the affected side. The needle should be passed down deep among the tissues, as the object is to effect thorough approximation of every portion of the wound, deep as well as superficial. Indeed, when it can be done, the whole muscular wall should be included in the stitch, and no possible harm will be likely to arise if it reaches through the peritoneum, in the same manner as after ovariotomy. The ligature may consist either of silk, well waxed, or of steel wire, as the surgeon may prefer; for, in reality, there is no material difference in the effect. It is impossible to lay too much stress upon the manner in which the wound and opening of descent are closed. It may be assumed as a rule that the more perfect the consolidation is, the less liable will the parts be to a recurrence of protrusion, and conversely. Hence the deep stitch is always, when practicable, of paramount importance.

The after-treatment in herniotomy must be conducted with the greatest possible care and attention. The most perfect quietude of mind and body must be observed; the abdominal muscles should be maintained in an easy and relaxed position; the bowels should be locked up with full doses of morphia, repeated every twelve hours; and the diet should be of the mildest and most concentrated character, consisting, for the first few days, exclusively of beef-essence, milk, or animal broth, taken in small quantity, not too frequently repeated. The nausea consequent upon the strangulation generally promptly disappears of its own accord; if it persist, the most appropriate remedy will be a dose of chloral or the neutral mixture, with a sinapism to the epigastrium. A third of a grain of morphia, hypodermically injected immediately after the operation, generally answers the fourfold purpose of allaying gastric irritability, tranquillizing the system, inducing sleep, and constipating the bowels. The bladder must be relieved, for the first few days, with the catheter. An enema of turpentine and assafœtida may, at any time, be employed to free the bowels of gas; but no laxative—not even one of the mildest kind—should be administered until all danger of peritonitis is passed. As a general rule, it is well to withhold all medicines of this description for the first five or six days. Solid food should not be given for at least one week, and then only in small quantity and with the greatest care, lest portions of undigested articles should come in rude contact with the recently constricted structures, and thus occasion pain and obstruction, if not more serious trouble.

As the great danger after strangulated rupture is peritonitis, every effort should be made to prevent it, or, if it have already taken place, to moderate and remove it. It is not necessary to repeat here what is familiar to every practitioner in regard to the symptoms of peritonitis. The small, frequent, corded pulse, the pinched features, the tender and tympanitic abdomen, the intolerance of the slightest pressure and of the weight of the bedclothes, the retracted limbs, the cold extremities, the gastric irritability, and the general restlessness, all point, with unerring certainty, to the nature and seat of the disease. The most important means of counteracting the morbid action are leeches, turpentine and laudanum stupes, vesication with cantharidal collodion, and morphia in full and repeated doses, to relieve pain and restlessness and to lock up the bowels. General bleeding must not be omitted, if the patient is robust and plethoric and the disease is still in its incipiency.

When the patient is ready to leave his bed, the affected parts must be supported with a well-constructed and well-adjusted truss; otherwise the adhesions will almost be sure to give way, followed by a reproduction of the rupture. The parts generally remain tender for some weeks, and are consequently unable to bear much pressure. It need hardly be added that the patient should forever after guard most scrupulously against all the exciting causes of the complaint, especially straining and heavy lifting.

In our next lecture we shall study the condition of the protruded parts, and speak of certain operative procedures which time will not permit us to consider to-day.

CLINICAL LECTURE

ON HYDROPHOBIA.

BY J. FORSYTH MEIGS, M.D.,
Physician to the Pennsylvania Hospital.

Delivered Saturday, October 30, 1869.

(Concluded.)

GENTLEMEN: On the 11th of last month I read you the history of a case of hydrophobia which had been in the house two days, and which had proved fatal on that very morning. I also made some remarks upon the cause of the disease, its diagnosis, prognosis, and treatment, and promised to inform you of the results of a post-mortem examination which I proposed making, as soon as these could be prepared for you. I proceed now to fulfil this promise. I shall first read you the notes made at the time of the examination by Dr. George Pepper, and then refer to some microscopic examinations of the tissues made at a later date.

Post-Mortem Examination at 4 *P.M. of the Day of Death, September* 11, 1869.

Body very muscular and well nourished. Muscular system unusually developed. Cadaveric rigidity well marked, but not at all excessive. Expression of face perfectly placid. Extensive suggillation of dependent portions of body and limbs.

Brain structure of normal consistence and appearance. No marked increase of the puncta cruenta; no thickening or opacity of membranes; considerable venous congestion of meninges; slightly increased amount of perfectly limpid cerebro-spinal fluid in subarachnoid space; no effusion in the ventricles.

Spinal cord.—Of good consistence; no softening or unusual congestion; slightly increased amount of spinal fluid.

Lungs.—Partially collapsed, but readily and entirely inflatable; intensely congested, and of a deep purplish color; no structural disease; no pleuritic effusion or thickening.

Heart.—Of normal size; firmly contracted; structure and valves perfectly normal. Right auricle distended with black, fluid blood. Left auricle empty. Right ventricle contracted; a small, dark, soft clot in its cavity. Left ventricle firmly contracted; a small "chicken-fat" clot, about the size of a

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bean, in its cavity. With these exceptions, the heart was empty.

Liver.—Large, deeply congested, apparently perfectly normal.

Kidneys.—Healthy; gorged with blood; capsule, in being separated, drags with it small portions of the cortical structure.

Spleen.—Dense, apparently only from intense congestion; of normal size and perfectly healthy.

Tongue.—Papillæ at base congested and slightly enlarged.

Larynx and *pharynx* perfectly healthy—not even congested.

Intestines healthy.

Arteries healthy; deeply stained by the blood.

Blood everywhere, with the exception of the clots alluded to in the heart, perfectly fluid, bistre-colored.

Dr. William Pepper, the curator of the hospital museum, writes me as follows as to the microscopic examination of the brain and spinal marrow:

The portions of nervous tissue taken for examination from the case of hydrophobia consisted of pieces of cerebral hemispheres, corpora striata, pons, medulla, and the entire spinal cord. All the portions were examined with high powers in the recent condition, and, in addition, the spinal cord was thoroughly hardened in alcohol, and fine sections cut with a razor, which were examined with a low as well as with a high power.

The brain, corpora striata, pons, and medulla were in all respects healthy; their consistence was good, and both cells and nerve-fibrils were normal. The tissue of the spinal cord was also entirely healthy; the nerve-fibrils presented a normal appearance, and the cells of the gray substance contained no excess of granular matter, and retained their normal shape and polar prolongations.

The blood-vessels and perivascular sheaths, both of brain and spinal cord, were healthy. Examination of sections of the cord showed no disturbance whatever of the normal relations of the parts by interstitial effusion or degeneration.

Dr. Joseph G. Richardson, the micrographer of the institution, examined the saliva and blood of the patient, and I will read the account he has sent me of the results of the investigation. His note is dated September 16, and is as follows:

The ordinary mode in which hydrophobia is conveyed from the inferior animals to man, as well as the frightful activity, in most cases, of the associated glands and mucous membrane engaged in the secretion of the saliva, point so strongly to the salivary apparatus as playing an important part in the disease, that it seems surprising that no careful microscopic investigation has hitherto been made of the salivary fluid; and the opportunity afforded by this well-marked case was eagerly seized upon to supply some part of the omission.

When the patient had been properly secured, during the violent paroxysms occurring on Friday morning, twenty-two hours before death, and, consequently, at a time when the symptoms were fully developed, I managed, after several abortive efforts, to catch in a tumbler a portion of saliva as it was ejected from the mouth, and to preserve it in a small vial quite free from extraneous matter. As first collected, it was pure white, and filled with air-bubbles; but, after standing for about three hours, this froth subsided into a transparent, colorless, jelly-like substance, very viscid and tenacious, inodorous, or nearly so, and having a slightly alkaline reaction; in quantity it amounted to about one-third of a fluidrachm. When examined under the field of a $\frac{1}{15}$ inch objective, giving an amplification of about 1200 diameters, this material showed most of the usual constituents, except that none of the ordinary salivary corpuscles with actively revolving molecules were visible; but in their stead were observed numerous rounded, oval, or irregular bodies, averaging about $\frac{1}{2000}$ of an inch in diameter, many of them in active amœboid motion, thus strongly resembling the cells of common yellow mucus. These were, on further consideration, supposed to be salivary corpuscles which, on account of the density of the medium in which they were imbedded, had failed to expand; and, to test this theory, the secretion was thoroughly mixed with twice its bulk of pure water, and, after a short interval, another portion examined, when it was found that the corpuscles had become spherical and showed the rapid movement of their contained molecules, presenting, in fact, the external appearances of normal salivary globules. From this experiment we may calculate the original specific gravity of the viscid saliva to have been about 1021 instead of 1007, its usual average density.

But, although these salivary corpuscles resembled, when thus distended, in size, shape, number of nuclei, etc., those of the healthy secretion, many differed from them in the character of their cell-walls, which often seemed to have undergone a process of fatty degeneration precisely analogous to that so commonly seen in cells of a fatty liver or kidney. This apparent deposit of fat was in the ordinary form of globules and oval masses, varying in size from the $\frac{1}{2000}$ to the $\frac{1}{5000}$ of an inch in diameter, and occurring to a greater or less extent in about one-third of the corpuscles; like fatty matter in cells from other portions of the body, it often showed itself in the form of one comparatively large, two or three smaller, and several minute, highly refracting particles, irregularly scattered within the boundary of the cell-wall.

In accordance with the doctrine that the salivary mucus and white blood corpuscles are identical, I was led to expect some similar change in the white cells of the blood, and the following day, at the autopsy, I was enabled to procure specimens for careful investigation. About half a fluidrachm of blood was pressed from the median basilic vein and from the ascending vena cava, and a portion of the latter vessel, just above its origin, was twice tied firmly and removed. When examined next day, it was found to contain at least a fluidrachm of blood between the two ligatures, which had not been exposed to any possible admixture. Of these specimens, that from the basilic vein coagulated feebly into a soft, currant-jelly-like clot, while those from the vena cava remained almost fluid. On examining them with a power of 1200 diameters, the red disks were seen to be normal in size, shape, color, and power of aggregation into rouleaux, in spite of the entire absence of fibrin, no filaments of which could be detected, although I now rarely fail to find them in healthy blood. The number of minute bacteria-like bodies appeared to be somewhat increased, and the proportion of dumb-bell-shaped particles to molecules visible only as mere points was decidedly augmented. The amœboid movements of the white blood corpuscles were of rather more than ordinary activity, and most of the cells exhibited a normal appearance, but at least fifteen per cent. of their number had, either within their cavities or imbedded in their membranous walls, highly refracting particles varying in size and shape, although generally rounded in contour, and somewhat like what may often be observed in the pus corpuscles of a chronic abscess. One white blood cell, containing an apparent fat globule, about one-fifth of the diameter of a red blood disk, was watched for upwards of ten minutes, while it made its way among the rouleaux of red corpuscles for a distance of at least ten times its own length, and during this whole journey the particle (supposed to be of fat) remained near the centre of the moving mass. On the addition of water to swell up the white blood corpuscles (as described in my paper in the *Pennsylvania Hospital Reports* for 1869) in the usual way by endosmosis, these refracting granules generally remained attached to, or imbedded in, the cell-wall; but in two instances they were observed floating freely in the cavity, and apparently jostled from side to side by the active movements of the contained molecules.

On treating the blood thus diluted with a solution of aniline, no coloration of the apparent fatty globules was perceptible until long after the nuclei and cell-walls of the white corpuscles had become strongly tinted.

Liquor potassæ rendered these particles more distinct by dissolving, or at least rendering invisible, the limiting membrane of the white cell, thus indicating that there were no delusive appearances produced by the corrugation or condensation of the membranous investment. Repeated efforts were made to test for fat with ether, but the difficulties attendant on the application of this reagent under such a high power were so great that no positive conclusion could be reached; it was, however, unanimously agreed by several experienced

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microscopists, to whom I exhibited specimens, that these white corpuscles presented a wonderful resemblance to cells which had undergone fatty degeneration.

Of course, any deductions from these appearances until corroborated by other observers would be premature; and, indeed, I am only induced to lay results based upon a single case before the profession by the fact that such is, fortunately for our race, the comparative rarity of the disease that years may elapse before another similar opportunity for investigation occurs in this hospital, during which time the researches of other microscopists, whose attention is hereby invited to the subject, may contradict or confirm my conclusions, and, in the latter alternative, afford some assistance, perhaps, in penetrating the obscurity which has hitherto surrounded the etiology of hydrophobia.

You have now heard, gentlemen, a particular account of the results obtained by a careful post-mortem examination; and what do they teach us? Nothing, or almost nothing. We found in this case, as have other observers, a fluid state of the blood, congestion of the lungs, liver, spleen, and kidney, and a marked degree of staining of the lining membrane of the arteries. These are the conditions which have been usually found. A careful examination of different portions of the brain and spinal marrow revealed no departure from the normal condition of those organs. Whether a still more thorough investigation of the cerebral and spinal tissues by the method employed by Dr. Lockhart Clarke for the elucidation of the pathology of tetanus may yet throw light upon the true nature of this disease, remains to be seen. It ought certainly to be done so soon as any one who is competent, and who has the time, can find the opportunity. It would seem not unlikely that Dr. Clarke's method may do for the morbid anatomy of hydrophobia what it has already done for that of tetanus.

The condition of the salivary and white corpuscles of the blood, as described by Dr. Richardson, is certainly very interesting, and, so far as I know, quite new. Whether they are constant in the disease, and what value they may have in affording an insight into the effects of the rabies-poison upon the fluids of the body, must remain an open question. We are still too little acquainted, moreover, with the changes determined in the blood by the introduction of animal poisons into the body, to know whether the conditions found by Dr. Richardson are peculiar to hydrophobia, and what may be the influence of such changes on the vital processes of the economy.

The pathology of the disease is therefore involved in obscurity. All we know about it is that the introduction into the economy of man of the peculiar animal poison produced in animals affected with rabies, determines, to use the words of Romberg, an excess of reflex tension in the common origin of the nerves of respiration and deglutition, a manifestation of increased excitability in relation to stimuli indispensable to life, as air and water, and corresponding motor discharges by the nerves of deglutition and respiration.

ORIGINAL COMMUNICATIONS.

SUSPENSION IN SPINAL AFFECTIONS.

BY BENJAMIN LEE, M.D.,
of Philadelphia.

Read before the Medical Society of the State of Pennsylvania, June, 1870.

THERE is no single characteristic of the human form which more entirely commands our admiration, and more strikingly distinguishes it from those of the various families of the brute creation, than its erectness. So universally is this fact recognized, that it has been incorporated into our language. Considering an erect carriage and a well-poised head as an index, and hence a type, of a perfect physical organization, we, in common with the Germans, have carried the idea into the domain of ethics, and designate the individual who exhibits, in his dealing with his fellows, a healthy and undistorted moral nature, an *upright* man.

It is to the spinal column, and its mode of articulation with the pelvis and the head, that this noble peculiarity of our race is due. Any diseased action in either the essential or accessory constituents of this important organ must sooner or later result in the impairment of this distinguishing feature. Three deductions have been made from this well-understood fact, which have been shared, at different times to varying degrees, by the medical profession and the general public.

1. That a loss of erectness of figure, as a rule, indicates spinal distortion, and hence diseased action in either the spine or its motor apparatus.

2. That the distortion is not only an indication, but an actual element, of the disease, directly tending to aggravate and perpetuate the morbid conditions; and hence,

3. That a restoration of the distorted spine to or towards its normal position is an important means of checking the destructive processes and restoring it also to a healthy state.

It is on this last proposition that the mechanical treatment of spinal distortions is rationally founded. Two methods of effecting the result which it contemplates early suggested themselves. They may be designated as the *method of counter-extension* and the *method of counter-pressure*,—the first being an effort to straighten out the curved spine by traction in the line of its axis, acting in opposite directions from its two extremities; the second, to unbend the curve by forces applied at right angles to the line of its axis,—in one direction at its two extremities, and in the opposite direction against its point of greatest convexity. Both methods may be practically carried out in two ways: either by means of apparatus worn upon the person, indifferently called braces, supporters, assistants, splints, etc., which I shall designate as *spinal instruments*, or through the medium of apparatus acting from some fixed point of support outside of the person, which I shall call *spinal machines*. I have already, elsewhere,* assigned my reasons for believing that spinal instruments should be made only on the principle of counter-pressure. My object in the present essay is to indicate the perfect applicability of the principle of counter-extension to the construction of spinal machines, and to call attention to the rapid and admirable results attainable by its means.

I am well aware that for years past it has been the fashion for medical men to decry extension of the spine by machinery as unscientific and dangerous, those who write with special reference to these affections treating it with contemptuous ridicule, while systematic authors entirely ignore it. It has had powerful advocates, however, on both sides of the water. Among the more important in England may be mentioned Darwin,† Shaw,‡ and Sheldrake,§ and, in this country, Kissam, of New York, and Prof. Mitchell,‖ of this city, the latter of whom, with that carelessness of purely theoretical criticism which characterized the man, was particularly

* Transactions American Medical Association, 1866; and Contributions to the Pathology, Diagnosis, and Treatment of Angular Curvature of the Spine. Philadelphia, J. B. Lippincott & Co., 1867.

† Zoönomia, or the Laws of Organic Life. By Erasmus Darwin. Vol. iii. p. 140 *et seq.*

‡ Observations on the Causes and Early Symptoms of Defects in the Form of the Spine, Chest, and Shoulders. By John Shaw. London, 1827.

§ A Treatise on Diseased Spine and on Distorted Spine, with Cases to illustrate the Success of a New Method of Cure. London, 1816.

‖ North American Medical and Surgical Journal, No. 1, 1826.

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enthusiastic in its support, and, I may add, as successful in its employment. A surgeon of many years' standing in the navy of the United States is a living monument to the admirable results which that physician obtained in cases of spinal caries.

The plan which he adopted was the seemingly rather severe one of suspension by the head in the erect posture, the weight of a portion of the trunk and of the lower extremities being the extending force. This differed altogether from that of Shaw, who placed his patient in a recumbent posture and applied traction at the head and pelvis, and, to a considerable extent, from those of Darwin and Sheldrake, who, though they relied upon the weight of the body for their force, had their patient supported upon an inclined plane. Nevertheless, the idea was not a new one with him, by any means; for we find Bampfield saying that "in the erect state of the body the spine can be stretched by swinging by the head or by the hands," and that, "if it be the intention to stretch the upper half of the spinal column, swinging by the head will more particularly effect it, whilst the weight of the lower extremities will also extend the lower vertebræ in some degree." The portion of the appliance which Dr. Mitchell used, which was claimed by him as his own idea, as I understand it, was the *go-cart* provided with the means of suspension, which had for its object the conjunction of locomotion with extension, and which he termed, appropriately enough, his "spine-car." It is to this plan of extension by partial or complete suspension in the vertical position, whether in the standing or sitting posture, that I desire for a few moments to call the attention of the society. And, first, I wish to point out certain weak points in the treatment of spinal caries by counter-pressure in which I consider that it is most advantageously supplemented by this method. Our avowed object in making use of antero-posterior force in a horizontal plane is to substitute the oblique articulating processes, in great measure, for the vertebral bodies at the seat of disease, as the axis of support for the weight of the head and trunk. Now, while it is true that these processes are of comparatively firm texture, and almost invariably free from disease, it is also certain that the constant endurance of a weight so much greater than that which nature intended them to bear must be attended, in time, with a certain amount of absorption of their tissue. Besides this, their opposing surfaces are so oblique that much of the weight will necessarily fall upon their ligaments, which must become more or less relaxed, and thus permit the processes to slip by one another, distorting the articulation, and diminishing the height of the patient. This is one unfortunate result of this method. The other consists in the fact that we have no means of determining at what point in the column, intermediate between our opposing forces, either above or below the seat of the projection, the pressure applied against the spine in an anterior direction shall cease to exert its force. Theoretically, it should do so just where the abnormal projection meets the normal line of the column. But if there happen to be a weaker point than this, the force will be transmitted to that point, and we shall have an incurvation produced which, when below the projection, assumes the very troublesome form known as *lordosis*. This is a second evil, which can neither be prevented nor corrected by apparatus worn upon the person. But I think it will be acknowledged that extension by suspension—taking off this destructively abnormal weight from the processes, and gently stretching out the consecutive curve—is admirably adapted to palliate, if not to entirely remove, these difficulties.

The degree of pressure, too, which we are compelled to make use of in redressing the curve is sometimes so great as to provoke a superficial abrasion of the cuticle. This is especially apt to be the case in warm weather. Under such circumstances, modified suspension furnishes an admirable substitute, for a sufficient length of time daily to give an opportunity for reparation of the surface. It is also especially adapted to caries in the cervical region, affording the patient the most complete and delightful relief from the agonizing pain or wearisome discomfort which the weight of the head gives rise to.

I present, for the inspection of the society, three different pieces of apparatus, or machines, in which this principle is applied. And, in order that you may the better appreciate the mode of application, and the entire ease with which they are used, some of my patients who have been treated in this manner have kindly consented to be present and allow me to demonstrate their action.

Case I.—The little patient whom I now introduce to you is 7 years old, rather short of stature, as you see, but ruddy and well nourished, having the complete use of his limbs, walking freely, fearlessly, and naturally. When he first came under my care, five years since, he was completely paralyzed in the muscles of the lower extremities and, to a great extent, in those of the trunk, as indicated by inability to move even the terminal phalanges of the toes, or to maintain the sitting posture. His condition was, in fact, altogether a critical one. The cervical portion of the spine being the seat of caries, and two vertebræ having been, to a considerable extent, destroyed, the head was tilted back until the occiput rested on the shoulders, and so firmly that it was impossible to insert the finger beneath it, while the skin of this region was acquiring that moist, mucoid character often noticed when cutaneous surfaces are kept in constant apposition. He suffered from constant dyspnœa, respiration being to a great degree diaphragmatic; had frequent attacks of spasmodic gastralgia; was greatly emaciated; passed sleepless nights; and was, as may be imagined, excessively irritable, allowing his mother and nurse not a moment's ease. The application of a splint, provided with a head-piece for producing erection of the cervical spine by means of antero-posterior force, very soon relieved all his most pressing symptoms, but it was some months before he acquired sufficient muscular power in the legs to be able to move the toes. At this time my attention was called by Dr. S. Weir Mitchell, in consultation with whom I first saw the case, to his father's experiments and successes in the employment of suspension. Although greatly prejudiced against its use, I felt that at least no injury could ensue if it were employed with proper precautions, and determined to give it a fair trial, considering that a desperate case justified what I then viewed as a desperate remedy. I therefore had made for him this steel rod, bent at right angles and provided at its lower end, for a distance of about eight inches, as you see, with ratchet teeth on one side. The horizontal portion of this rod, carrying a steel bow, to which the chin and occipital strap could be attached, passes over the head, while the vertical serrated portion is received into a keeper screwed to the back of the little chair in which he ordinarily sat. The straps being adjusted to the head, I am enabled, by means of a pinion-key introduced at the back of the keeper, to elevate the rod, and thus extend the cervical spine at will. Conscious of relief, from the complete removal of the weight of the head from the ulcerated and sensitive vertebræ, the little fellow, to my surprise, became at once reconciled to so singular a position, and even enjoyed it. The paralysis now began to diminish with notably increased rapidity, so that he was soon able to sit alone, and could move the legs slightly. With a view to give him an opportunity of exercising these reawakened muscles, and of associating amusement with the necessary confinement, I therefore had a little rocker constructed upon which his chair could be fastened. This you now see before you. Placing him upon it, adjusting the straps, and making extension, you see how completely the head is supported, and yet with what freedom and fearlessness he rides, turning his head from side to side at pleasure, and bringing almost all the muscles of the trunk and lower extremities into active, though gentle, play. This amused him, and he often spent two or three hours a day upon it, with the effect of greatly

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increasing his muscular power. He was still, however, unable to walk. In order to teach him to stand and to encourage the natural movements of the legs, I then had this car or perambulator constructed (simply the child's go-cart, formerly so much in vogue for infants learning to walk), with a keeper attached to it posteriorly to receive the ratchet-rod. In this he was at once able to stand up without risk of falling, and soon began to take steps. The paralysis being completely relieved, the general health restored, and the position of the head greatly improved, his mother's anxiety was now aroused with regard to that inevitable accompaniment of carious destruction of cervical vertebræ,—distortion of the thorax anteriorly, and projection of the lower end of the sternum, unquestionably a very unseemly and distressing phase of the deformity. To remedy this defect as far as possible, by bringing the pectoral and other muscles of the thorax into action at the same time that spinal extension was being carried on, I devised—partly in imitation of Dr. Mitchell, and partly acting on a hint contained in a little German work on the "Treatment of Deformities by Curative Gymnastics," by Dr. Nitzsche, director of the "Orthopædeon" at Dresden—the *spinal swing*, a specimen of which I have caused to be erected here for your inspection. The contrivance for the support of the head is the same as in the other machine, viz., the steel bow with the double strap for the chin and occiput, in which the head is exactly balanced. But the elevating apparatus is now entirely different. Instead of the ratchet-rod, we have a stout cord or rope, and in place of a key and spring as an extending force, the patient's own hands and strength of arm. It is not necessary to have a frame constructed like this before you. A pulley may be firmly attached to a joist in the ceiling or over a doorway; the former is preferable, as giving greater length of rope, and, therefore, more freedom and variety of motion. Over this pulley passes the rope. One end of it is firmly attached to the steel bow over the top of the head; the other hangs down in front of the patient's face, and is provided with two movable ovoid blocks, which, sliding on the rope, serve as handles. These are placed from three to five inches apart, according to the size of the patient, and retained in position by a knot under each. The lower one should be about on a level with the top of the patient's head. Now, it is evident that, the head-straps being applied, as soon as the patient makes traction upon the rope by means of the handles the force is transmitted over the pulley directly to the head, which is thus drawn upward, and that the weight is equally shared by the head and the hands; so that, when the feet are raised from the floor, just one-half the patient's weight, less that of the head, is supported by the cervical spine. It is also plain that, when the disease is below the line of attachment of the arm to the trunk, the entire weight of the body below that point will be our extending force. The apparatus being under the patient's control, however, it is optional with him what amount of force he shall make use of. In the case of children, it is oftener necessary to caution them against using too much than to urge to use more. You see this little fellow gradually drawing himself up on his tiptoes, and now actually lifting his feet and allowing me to swing him back and forth, not only without pain, but with positive enjoyment. Under the use of this machine for from one to two hours a day, there has been a gradual amelioration of the thoracic distortion, the ribs assuming a more natural position, and the sternum falling more towards its normal inclination, while the general capacity of the chest has increased. A tendency to chronic and occasionally acute pulmonary catarrh, which more than once threatened to prove fatal, and which I was inclined to attribute in part, at least, to the compressed condition of the lungs, has also almost entirely disappeared.

Case II.—The young girl whom I now bring before you has been under my care since September last. She is 17 years of age. Her parents are both living. The father suffers from chronic rheumatism, but I am not able to discover any history of strumous antecedents. About a year before her physician called me to see her, her health having been previously all that could be desired, she began to suffer from pain in the back. This increased steadily, and in about six weeks wandering pains began to develop themselves in the head, radiating from the temples. Before long she observed that, after sitting for any length of time, she became stiff and could walk only with considerable difficulty. So great was this rigidity on rising in the morning, that it took at least two hours for her muscles (the flexors of the thigh more particularly) to become sufficiently relaxed to enable her to walk with any comfort. She grew steadily worse all winter, and early the next summer was obliged to give up her trade, which was that of envelope-folding, in consequence of the frequent falls which she had when walking in the street. These falls were caused by a sudden spasmodic contraction of certain of the flexor muscles of the thigh (principally the psoas and pyriform, presumably) of the left side, accompanied by excruciating pain in the hip. This pain and spasm also often attacked her during sleep, causing her to wake with a scream. By this time the headache had become very severe, and was often attended by obstinate vomiting. When I first saw her it was almost constant, as well as the pain in the hip already referred to. She was much emaciated, without appetite, not able to stand erect, or to walk across the room unassisted. Her physician had run through the whole list of anodynes without succeeding in relieving the pains, and greatly to the disgust of her stomach. I felt not the slightest doubt, from the symptoms, history, and attitude of the patient, that there was serious inflammatory, and probably ulcerative, disease going on in the spinal column; but it was impossible to discover its seat, no projection of a spinous process having yet taken place. From the absence of gastralgia, I concluded that it was below the dorsal region, and from the intense pain in the hip, that it was quite low in the lumbar region. I suggested to her physician that, the location of the diseased action not being positively indicated, it would be well to wait a short time before applying anything in the shape of a brace, and meanwhile to give what relief we could by the use of suspension. Accordingly, I caused a spinal swing to be put up directly over the couch on which she lay, and directed her to use it three times a day for ten minutes, gradually increasing the time as she became accustomed to it. This she did very rapidly, owing to the agreeable sensation of rest which the act of extension gave her. By the end of a week I was rejoiced to find her almost free from pain, with no vomiting, and quite a creditable appetite. The rigidity of the limbs was diminishing, and she could walk with some ease. By the end of the third week, however, I felt confident that I could detect a slight bulging of the last lumbar vertebra, and at once ordered a splint to be made, to give support in that region. In a week from this time she walked to my office and back, a distance of half a mile, in order to have it applied. Her improvement was now so rapid that at the end of three months she resumed work for half a day, and for the past four or five months has been working her full time, although somewhat against my advice. During the winter she has once even ventured to go to a ball and indulge her terpsichorean tastes. Her menses, which were suspended for several months, returned soon after the application of the splint. She continues to use the swing, and, as you see, although quite heavy, is not afraid to bear her weight strongly upon the head-straps. She generally uses it, however, in the sitting posture, with weights attached, in order that she may be able to employ her hands. I do not need to say anything as to her present condition. Her firm, elastic step, rosy cheek, and bright eye, testify plainly enough what her general health is. Her treatment, I may add, has been purely mechanical, no internal remedies having been used.

Case III.—This lad, the last case which I shall detain you to see, is fourteen years old. I first saw him in November last. He was then lying about the house, good for nothing, pale and anæmic, and—having been obliged to give up going to school, in which he was much interested—very despondent. He complained of headache, pain in the hips, running down one limb to the knee, morning rigidity, and exhaustion on walking a very short distance, so that he could not go a square without stopping to sit down to rest. In this case, also, not a trace of posterior deviation existed; but, upon causing him to stoop forward, a slight yielding towards the left appeared in the upper part of the lumbar region. Profiting by my experience in the last case, which was then just beginning to feel the benefit of the brace, I determined to give him support at once, —not emulating the caution of the practitioner of whom I re-

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cently heard, who, when consulted in a case of suspected spinal disease, gravely informed the anxious mother that it might be necessary to wait two years before it could be determined whether such were the case or not. A spinal swing was put up for him the next day, and so rapid was his improvement that in a week he was able to walk to my office, a full half-mile, to have his splint applied. In three months he was at school again, and has recently obtained my permission to play base-ball. He also, as you see, has no fear of hanging, if allowed to be his own executioner. This case is one of the deepest interest, from the gratifying fact that not a particle of deformity has made its appearance. I hold that the success of the treatment fully substantiates the correctness of the diagnosis, and that this boy is another living witness to the truth of the principle for which I have long contended—that inflammation of the spinal column is perfectly recognizable before it has reached the stage of caries and deformity, which evils may therefore, under favoring circumstances, be entirely averted. That it requires no education as a specialist to make the diagnosis in such cases, is sufficiently proven by the fact that the physician in whose practice these two very interesting cases occurred had in both instances become reasonably well convinced of the true nature of the disease before soliciting my assistance.

This mode of treatment is equally applicable to lateral curvature. In the incipiency of that affection, indeed, it may unaided be adequate to work a cure. By causing the patient habitually to take hold of the higher handle with the hand corresponding to the depressed shoulder, that shoulder is thus, for the time being, elevated and its muscles thrown into more powerful action than those of the opposite side, while the curve of the spinal column, if not too rigid, is entirely reversed, and, under any circumstances, diminished.

The advantages of the mechanical treatment in such affections, judiciously combining the use of instruments and machines, over that which consists in confinement to the horizontal posture and the establishment of exhausting purulent discharges, are incalculable. While it is, to say the very least, *as* successful in preventing and controlling deformity, it affords to constitutions which so pressingly demand them, those sovereign tonics, *exercise* and the *open air*.

PHYSIOLOGICAL ACTION OF THE LEAVES OF THE ERYTHROXYLON COCA ON THE EXCRETION OF URINE.

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WITH the exception of Mantegazza's statement, apparently resting on no analyses, that Peruvian coca increases the excretion of urine, we know of no other observations on this subject. During the period of these experiments we arose at 7½ A.M. and retired at 9 P.M. We were thus awake thirteen and a half hours, and asleep ten and a half. During the waking hours, five and a half were devoted to uniform exercise, and eight to study. We breakfasted at 8 A.M., dined at 12 M., and supped at 6 P.M. Having ascertained the required amount of food to keep up our weight, we ate at breakfast one ounce of bread, three ounces of eggs, ten grains of salt, and three drachms of butter; at dinner, two ounces of beef, a half-ounce of butter, and two ounces of bread; at supper, one ounce of bread, an ounce and a half of beef, and a half-ounce of butter. The weights of food are troy. We drank, at 7 A.M., 8 A.M., and 12 M., two hundred centimetres of water, with three hundred at 6 P.M. Thus, we daily ingested four ounces of bread, eleven drachms of butter, three ounces of eggs, three and a half ounces of beef, and ten grains of salt, with nine hundred centimetres of water. In the following tables our weight is in pounds, and was taken at the same hour on the last day of each series of experiments; the daily quantity of urine in centimetres, and its factors in grammes. We estimated the urea and chloride of sodium by the mercuric nitrate, sulphuric acid by the chloride of barium, phosphoric acid by the acetate of uranium, and free acid by caustic soda. The quantity of free acid is expressed by grammes of oxalic acid. These volumetric solutions were of the strength laid down by Neubauer and Vogel in their "'Analyse des Harns," 1867.

With the preceding conditions, the following table was computed for five days. The mean thermometric degree was 74° F.

Weight of Body.		Quant.	Urea.	Chlor. of Sodium.	Sulph. Acid.	Phosph. Acid.	Free Acid.
121⅛	1st day,	660.2	24.4200	9.7020	1.4621	1.4256	2.1792
	2d "	680.5	24.0400	9.1120	1.8360	1.4280	2.8360
	3d "	856.1	25.6800	9.5872	1.7120	1.4124	2.3048
	4th "	961.8	25.5055	10.8593	1.9316	1.4030	2.6711
	5th "	947.6	25.4491	10.4170	1.5530	1.4583	2.3051
Average . .		821.24	24.8189	9.9355	1.6989	1.4254	2.4592

During the continuance of the preceding experiments our general health was excellent. The above table shows the average quantity of urine, and the state of its urea, chloride of sodium, sulphuric, phosphoric, and free acids, for five days. The day following these experiments we added one drachm of coca leaves to each meal, and on the remaining days two drachms, and began the experiments tabulated below, under the same conditions as in the preceding series.

The experiments were continued five days. The average temperature was 72.8° F.

Weight of Body.		Quant.	Urea.	Chlor. of Sodium.	Sulph. Acid.	Phosph. Acid.	Free Acid.
121⅛	1st day,	899.5	25.1720	8.9900	1.5822	1.4563	2.3762
	2d "	792.1	22.5720	7.2072	1.2334	1.5543	1.2384
	3d "	718.8	22 0242	5.3850	1.4072	1.3929	2.1142
	4th "	718.5	22.2540	5.0260	1.3642	1.3498	1.7469
	5th "	739.3	22.0222	5.9859	1.4336	1.4188	1.3482
Average . .		773.64	22.8088	6.5188	1.4041	1.4344	1.7647

On comparison of the averages of each five days, we find that the addition of the coca decreased the quantity of urine 47.60 centimetres; of the urea, 2.0101 grammes; of chloride of sodium, 3.4167 grammes; of sulphuric acid, .2948 grammes; of free acid, .6945 grammes; and increased our weight one-eighth of a pound, and the phosphoric acid in the urine .0090 grammes. The action on phosphoric acid is to be considered normal. During the period of these last experiments our sleep was somewhat disturbed, with frequent headache, and slightly diminished appetite. Microscopically, we found in the urine an abundance of octahedral crystals of oxalate of lime of all sizes, which were got rid of by filtration. On micro-chemical examination of the leaves, we found quadratic crystals, soluble in hydrochloric acid but not in acetic, which we believe to be oxalate of lime crystals, and the source of those in the urine. Beneke's statement that the earthy phosphates are dissolved by oxalic acid, and appear in greater abundance when that acid is most formed in the human economy, possibly may be the explanation of the fact that the phosphoric acid was not diminished. From an examination of these experiments we are led to

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the conclusion that coca is a retarder of the retrograde metamorphosis of tissues, thus increasing the weight of body. The origin of the frequent headache, the disturbed sleep, and deficient appetite is not to be sought in the digestive apparatus, but rather in an influence similar to that exerted by other excitants of the nervous system, as coffee and tea. Although the diminution of tissue-waste, as indexed in the urine, is not so great as was to be expected, knowing the arduous labor performed by the Peruvian Indians under its use, yet it is probable that there may be a greater decrease of the other excretions of the body. Its action on the urinary constituents is the same as that of coffee, as heretofore supposed. On comparison with tobacco, we find that the habit of chewing the leaves of each is not easily dismissed, that the water, urea, and chloride of sodium are decreased by both, but that the uric, phosphoric, sulphuric, and free acids are increased by tobacco. The effects of the habitual use of each on man can be explained by this action on the urine; for coca is not known to cause any great detriment to the health, or to shorten life, while tobacco in excess undoubtedly does the former, and probably the latter. From these data we conclude that coca-chewing is far preferable to tobacco-chewing, and that the former, without doubt, can be useful to persons having much labor to perform, with a scanty supply of food; although where food is abundant we see no good reason for the use of coca. We regret that we were unable to calculate the amount of fæces, of perspiration, and of the water and carbonic acid of the expired air; yet we hope that we have added a few facts of therapeutical as well as physiological value.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC FOR DISEASES OF THE EYE AND EAR, OCTOBER 27, 1870. SERVICE OF DR. GEORGE STRAWBRIDGE.

THE following cases were exhibited and commented upon:

I. A case of Chorioiditis suppurativa, occurring in a man aged 26, who, about five weeks ago, was struck by a small glass splinter, which perforated the left cornea at its lower outer quarter close to the sclerotic border, and doubtless penetrated through the ciliary bodies into the vitreous humor. Four days afterward the cornea was slightly cloudy, as well as the aqueous humor, with commencing cloudiness of the lens, accompanied by great ciliary injection and great pain on pressure on the eyeball. To-day a peculiar yellowish-golden reflection is observed from behind the lens in the anterior portion of the vitreous humor; the eyelids are much swollen, and have an increased temperature. The treatment consisted in the application of six leeches to the temple, the local use of a solution of atropine,—four grains to the fluidounce,—and the administration of a saline cathartic. Foreign bodies penetrating into the vitreous humor generally by their own gravity sink to the lower part of the eyeball; and some cases are reported where, by an incision through the sclerotic and the other tunics of the eyeball, immediately under the foreign body, the foreign matter was extracted. In this case, unfortunately, the patient applied too late, as at that time the different humors were so cloudy as to render it impossible, by the ophthalmoscope, to locate the foreign substance.

II. The second case was that of a staphyloma projecting from the cornea of a colored child, aged 12 years, who, three months previously, had suffered from a Keratitis suppurativa, resulting in repeated corneal perforations, adhesions of the iris, and the existing staphyloma, which is of the size of a large grape. In this connection the enormous enlargement of the lachrymal gland is to be noticed as a curious fact. By slight eversion of the upper lid it protrudes itself into view, being six to eight times larger than in its normal condition. The increased flow of tears is also very marked. The staphyloma was removed by taking a V-shaped piece from the growth. The first cut was made by the Beer knife, transfixing the tumor and then cutting outward; then, firmly grasping the part with a pair of forceps, the second division was made by the scissors, and strong pressure was brought to bear by a bandage on the eyeball, causing the two surfaces to be brought into juxtaposition.

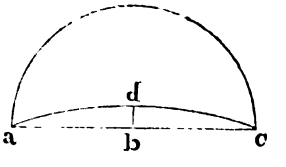
[Six days afterwards the wound was healed. The lachrymal gland had returned to its normal size, and no doubt the staphyloma had been acting as a foreign body, and so causing the hyperæmic condition of the gland.]

III. The third case was that of a cataract occurring in a man aged 45, caused by a splinter of steel penetrating through the cornea into the lens one year ago. This was followed by the formation of a cataract, having a hard nucleus with soft cortical matter. This cataract was extracted by Von Graefe's linear extraction method. The lecturer remarked: In this connection, a few remarks on this method, and its real value in comparison with the corneal flap extraction, may not be inappropriate. I may add that during the winter and spring of 1868 I had the good fortune to see, at Von Graefe's clinic in Berlin, at least fifty cases of extraction by this method, and from my notes and observations made at that time I have condensed the following:

Prof. Von Graefe divides his operation into four distinct stages.

1. The incision. This should be so made as, in its passage through the eyeball, to form a tangent with the cornea at its sclerotic border. The outer part of the wound-track will fall in the sclerotic coat, but the inner two-thirds should fall in the cornea, where it is overlapped by the sclerotic coat. For this purpose a long, narrow knife is used, which enters the sclerotic coat at a point one-third to one-half a line from the corneal border, and directed towards a point slightly inward from the centre of the anterior chamber. The knife, directed towards this point, is now pushed forward until it has buried itself in the anterior chamber to a depth of 3½ to 4 lines; then, depressing rapidly the handle of the knife until it has become horizontal, the blade is advanced to form the counterpuncture at a point in the sclerotic equally distant from the cornea as the puncture, the distance between the puncture and counter-puncture being four and a half to five lines. The knife is then to be rotated obliquely forwards, and pushed on, until its length is almost exhausted; and then, by drawing it carefully backwards and forwards, the cut is completed. The knife now lies beneath the conjunctiva, which should be so divided as to leave a flap of conjunctiva at least one line in height.

This cut has been called a linear one. Strictly speaking, it is not. (*See cut: ac = length of cut; bd = flap-height.*) A flap having a height of about one millimetre is really formed, or the height of the flap is in proportion to the length of the cut as 7 is to 100,—bd : ac :: 7 : 100,—the greatest flap-height being where the knife enters the sclerotic coat.



2. The second stage of the operation is the iridectomy, which is rendered necessary by the extreme peripheral position of the cut, as a prolapse of the iris would be inevitable. For this purpose the conjunctival flap is turned aside with a pair of small iris forceps, and then, seizing the iris, so laid bare, with the forceps, and holding the scissors parallel to the wound, by several successive snips the iris is divided,—taking care to hold the iris moderately tense until the division is completed. At this point great care should be taken to leave no portion of the iris in the wound. With this end in view, Von Graefe's vulcanite spoon is taken, placed on the eye, and gently passed from the angle of the wound towards the centre of the cornea; and, if not successful in this way, repeated tappings over the outer angle of the wound will often cause the iris to contract and resume its normal position; or if it happens that a small portion of the iris is found in the incision, this may be gently replaced by a silver curette. The size of the iridectomy depends very much on the size of the cataract; as a rule, a medium iridectomy is sufficient.

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3. The third stage of the operation is tearing the lens capsule. This is done by Von Graefe's cystotome, making three incisions,—one passing along the outer pupillary edge, the second extending along the inner pupillary border, and both extending from the lower edge of the pupil up to the wound. The third cut traverses the capsule in a line with the incision.

4. The fourth stage is the removal of the lens. This is done by a vulcanite curette placed on the margin of the cornea opposite to that of the wound, and by a sliding motion backwards and forwards, some pressure being exerted backwards and upwards at the same time, the lens is made to present itself at the wound,—when the pressure is made directly backward, to fully engage the lens in the wound; then, by a gentle upward pressure, the lens is removed. This may be accelerated by gently pressing the edge of the incision backward by a curette, especially if the lens shows a disposition to move behind the wound.

Any loose cortical matter that may be left is easily removed by the forefinger being placed on the lower lid, and so gently rubbing the cornea by the lid, some slight upward pressure being made at the same time.

After-Treatment.—The eye is gently closed, and the hollow space at the internal angle filled with finely-picked charpie. Over this a bandage, made of very elastic flannel, is laid, passing around the head and under the ear, with three turns over the eyeball, each one exerting slight pressure, to render the eyeball immovable. This bandage is renewed every 24 hours. Atropine is applied only after the second or third day, at which time, if the case has progressed favorably, the wound will be found closed, and on the fourth day the patient is allowed to leave the bed. Any ciliary pain that may arise during this time is relieved by hypodermic injections of morphia, of one-fourth to one-eighth grain. Such, as briefly as possible described, is Von Graefe's linear extraction. Now let me add a few words as to its advantages and disadvantages as compared with the corneal flap extraction.

Advantages.—1. Much less frequent loss of vitreous humor, from the fact of the wound being so much smaller, and because gaping of the wound, which depends on the height of the flap, is by this operation reduced to a minimum. In 230 cases reported by Von Graefe, vitreous humor was lost in only nine.

2. The large conjunctival flap unites very quickly, often in a few hours, and then acts as an air-tight dressing for the sclero-corneal wound, hastening its union, and so lessening the danger of suppuration of the edge of the wound.

3. The lens is removed without traction of any kind being employed, and so lessens the danger of iritis.

4. The confinement to bed is much shorter, being about one-half that of the flap operation.

Disadvantages.—1. The increased difficulty of the operation; as, for example, in the incision, where the direction of the knife is changed three distinct times, rendering the cut more difficult to make.

2. The increased frequency of secondary cataract after the linear extraction.

The prognosis of the linear extraction is better than that of the flap, Von Graefe losing by the old flap operation five per cent. of his cases, and by the linear cut only two and one-half per cent.

Choice of Position for the Operation.—The upper incision presents the least deformity afterwards, but has the disadvantage of being more difficult of execution than the downward incision. Both have their warm supporters, Professor von Graefe much preferring the former.

JEFFERSON MEDICAL COLLEGE.

OPHTHALMIC CLINIC OF DR. R. J. LEVIS.

NOVEMBER 5, 1870.

CONGENITAL ABSENCE OF BOTH UPPER EYELIDS.

OPERATION FOR THE RESTORATION OF THE LID OF ONE EYE.

Reported by Dr. L. H. Adler.

THIS case is of extreme interest, as it appears to be one without a recorded precedent. Various congenital deformities of the eyelids have been noticed, particularly such as adherence of the lids at their ciliary margins; adhesions of the inner surfaces of the lids to the eyeball; a cleft in the lid, somewhat resembling that of hare-lip; an unnatural shortness of the upper lid, so that the eye cannot be closed; and a congenital turning in or turning out of the lids. I am, however, unable to find a recorded case of congenital absence of the upper eyelids, unassociated with monstrosity or other extreme deficiency of development.

In this case both eyeballs are without the protection of the accessory appendages of upper eyelids. The lower lids are in every respect normal, and the other features are well developed. The outer and inner canthi are perfectly formed, and a vestige of development of an upper lid exists in a little horizontal projection from each outer canthus, containing a few cilia.

The child, a male, is aged sixteen months, and is in all other respects well developed and healthy. The deficiency of the upper eyelids was noticed at birth, and, a few days after, the eyes, as would be expected, became much inflamed from exposure to the desiccating and other irritative influences of the atmosphere. There is a continuity from the integument of the forehead down to the edge of the orbit, and a thin veil of the skin is blended with the conjunctiva and is lost on the upper part of the cornea. The cornea still retains an imperfect translucency, so that the iris cannot be seen. The child is evidently able to notice the passage of objects before its eyes, and keeps its fingers playfully in motion before them. There is even some intolerance of light when sudden transitions are made.

The object of the proposed plastic operation is to cover the eyeballs for protection, so that the cornea may regain its transparency and the staring unsightliness of the disfigurement be relieved.

In devising a plan for the operation, it is desirable, as some of the peripheral fibres of the orbicularis muscle exist, that their action may be retained for the newly-formed lid. It is also assumed that the occipito-frontalis muscle will eventually assist in the elevation.

Flaps of integument were made from each side of the orbit by incisions in the direction of the dotted lines in outline figure 1.

These flaps, when adjusted over the eye, and the gaps produced by their removal closed by sutures, presented an appearance as represented in figure 2.

Fig. 1.

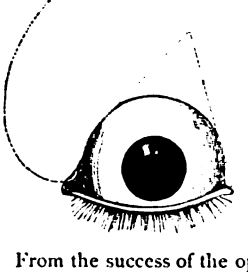
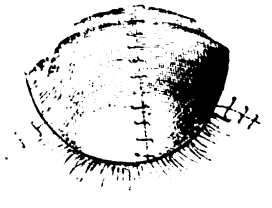


Fig. 2.



From the success of the operation, as judged of immediately after its performance, it was evident that the eye would be protected by a lid having some power of motion, and the appearance of the face be improved.

TREATMENT OF METRORRHAGIA.—M. Dupierris (*Union Médicale de la Gironde*, Feb.; from the *Practitioner*, July, 1870) recommends iodized solutions, by injection, in the hemorrhages that occur after childbirth, and also as a means of preventing the access of puerperal fever. This remedy produces an excitation of the internal surface of the uterus, which tends to make it contract. It thus aids the uterus in expelling clots, but does not, like the perchloride of iron, act as a direct hæmostatic, or cause the formation of small clots in the mouths of the vessels, which are apt to act as foreign bodies and may become the source of various accidents. He clears out all clots from the interior of the organ, and then injects, with considerable force, a solution of one part of tinct. iodine to two of water and a small proportion of the iodide of potassium. The uterus quickly contracts, and the lochia are sparing and free from bad smell.

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THE MEDICAL TIMES.
A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

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TUESDAY, NOVEMBER 15, 1870.

EDITORIAL.

TO OUR SUBSCRIBERS.

IN our last issue we announced that all future numbers of THE MEDICAL TIMES would contain twenty pages of text. This change has been necessitated by the gratifying and steadily-increasing pressure of valuable material for publication, whilst it is more than justified by the rapid increase in the list of subscribers.

The articles already published attest the sincerity of the promises of support which we received from many eminent writers; and we can even now point with satisfaction to the realization of our hope of making this a truly representative journal. With the increased space at our disposal, we shall be able to render several of our departments much more complete and full; and we trust that, through the arrangements that have been perfected for securing the earliest notice of all important movements in the army medical service, full reports of the transactions of several influential and active societies, and frequent notices of the most interesting points in the hospital and clinical services of the city, THE MEDICAL TIMES will in the future still more highly merit the flattering support already extended to it.

THE UNITED STATES PHARMACOPŒIA.

IT is evidently a trite proposition that there are few things of more importance to the medical profession than the official Pharmacopœia or standard list of medicines and preparations; and, as the commencement of another decade has brought the subject again before the American medical public, we conceive that it is well worthy our editorial space. Some of the oldest members of our profession doubtless still remember the birth of our national standard; but to most it is probably unfamiliar, and therefore it seems best first to give a sketch of its history, whilst in a second article its present and future will afford a topic for comment.

Up to 1820 there had been no recognized standard in the United States, nor, indeed, any work which offered itself as such. It is true that in certain districts endeavors had been made to regulate the preparation of medicines, and the Pharmacopœias of the Massachusetts Medical Society and the New York Hospital had exerted a limited influence in their respective circles, but they were strictly local in origin and aim, and were by no means supreme, even in their immediate neighborhoods. The constant annoyances and disasters arising from this want of a common standard can well be imagined; and, as the number both of doctors and druggists increased and the intercourse between widely separated communities grew more close and frequent, this state of affairs became more and more intolerable. As early as 1814, Dr. Coxe, in the preface to the third edition of his Dispensatory, proposed the formation of a national Pharmacopœia; but it was not until 1818 that the New York Medical Society, at the suggestion of Dr. Lyman Spalding, made an official proposition, which was received and acted on with warm approbation throughout the country. In accordance with this, the United States was divided into four districts,—Northern, Middle, Southern, and Western; and in each of these a convention was directed to be held. It was, however, only in the Middle and Northern sections that the meetings actually occurred and manuscript Pharmacopœias were prepared.

The latter, at a subsequent general convention, held in Washington, were compared, and out of them was formed a national Pharmacopœia, which was published in Boston, 1820. The reception of this book by the press was not at all flattering, and there can be no doubt that it deserved a large portion of the obloquy freely heaped upon it. The journals of the day are singularly in agreement in their denunciations of the work and of "the gross incompetency or gross negligence of the editor or editors," loudly calling upon them and their co-workers in the convention to buy up and suppress, at their own expense, "the whole impression, that not a copy may reach the European shores." It is not worth while, at this date, to dwell upon the innumerable faults in the work, yet we cannot forbear mentioning one as an example: thus, *aqua potassæ* is the name given without distinction to two preparations,—the one a strong solution of caustic potash, the other a solution of carbonate of potassa!

There were, however, some apparently original excellencies, which have been preserved through subsequent editions. It had previously been the custom to arrange medicines in Pharmacopœias in accordance with some real or supposed analogy in their nature or action, and to give precedence to the most important; but in this work the alphabetical order was adopted.

Again, the prevailing complex nomenclature was replaced by a much simpler and briefer one. Thus, assafetida, in the Pharmacopœia of the Edinburgh College, was known as *Gummi resinæ ferrulæ assafœtidæ*, whereas *Assafetida* was the short and equally exact title substituted.

The most useful act, however, of the convention of 1820 was the devising a plan for the future revision of the work, in accordance with which the president was instructed to issue writs of election, in January, 1828, to the several incorporated State medical societies

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and incorporated medical colleges, requiring them to ballot by districts for three delegates to a convention to meet in Washington in 1830. Owing to the hope that the revision might afford a more worthy standard, even the Pharmacopœia of 1820 was, to a great extent, accepted by the profession.

On the 4th of January, 1831, the second convention met, and finally adopted a manuscript copy of a revised Pharmacopœia prepared by Drs. George B. Wood and Franklin Bache as the basis of the new work. This copy was referred to a large committee for final revision, and, after some slight alterations, it was again referred to a sub-committee for final action. This committee consisted of Drs. Hewson, Wood, and Bache, and under their supervision the book was at last published. It was a work of vital importance to the professional welfare. An acceptable Pharmacopœia was a necessity for further progress. The first had been an acknowledged failure, greeted with scorn and derision. If this met a similar fate, the danger was great that the enterprise would be abandoned.

More than this,—opposition had already sprung up, so that there was a further danger that, if the regular revision were of but moderate excellence, two Pharmacopœias would be in existence, recognized in different localities, and the road be entered upon which would lead to the anarchical condition of every large town or petty medical centre having its own distinct Pharmacopœia. Of this opposition Pharmacopœia we have been unable to find a copy, but its history appears to be as follows: Two, or perhaps three, gentlemen met in New York, elected a president and secretary, and then adjourned for five months, directing that, as none of the Western and Southern States were represented in the first meeting, circulars should be sent in the mean while to each of the medical societies and medical institutions in those States, requesting delegates to the second session. At the time appointed, the second gathering met. In it were included one gentleman from Charleston, South Carolina, one from Cincinnati, two from Yale College, one from Berkshire Medical College, and five resident physicians of New York, which latter city, as a reviewer naïvely remarks, was thus fairly balanced against the rest of the United States. It was the work of this convention that was published in 1830 in New York, with the title, "The Pharmacopœia of the United States of America; by the authority of the General Convention."

Fortunately for the profession, the quality of this book was scarcely better than its honesty. Full opportunity was therefore afforded to hostile criticism, and this was quickly embraced by Dr. George B. Wood, who administered a *coup de grace* in a long, scathing review in the *North American Medical and Surgical Journal* for 1831,—a review whose bitter and humorous irony is exceedingly well carried out, and contrasts strangely with the better-known dignified style of its now famous author. The hand which was the chief in building up the Washington revision, whose excellence soon became universally recognized, proved itself in this equally skilful in tearing down its bastard rival. In order to insure the permanence and authority of the United States Pharmacopœia, and with no idea of the pecuniary success which it has achieved, the United States Dispensatory was soon afterwards published by its authors, and American pharmacy, to the astonishment of many, leaped at once, as it were, into the arena fully armed, and prepared to maintain the foremost rank, which it has ever since held.

From 1830 to the present time the history of our Pharmacopœia has been that of the regular decennial meeting and subsequent revisions, and affords nothing necessary to be noted here; and we leave, therefore, the history of the past, expecting in a future number to speak of the present and the future.

SMALLPOX ON BOARD OF THE FRANKLIN.

THE Washington correspondent of the *New York Tribune* stated, September 1, 1870, that the Fleet Surgeon of the European Fleet reported to the Navy Department, August 8, that the United States ship Franklin, the crew of 597 men being in good health, sailed from Lisbon for Flushing June 18; that on the 26th a man, who had not been out of the ship at Lisbon, and who had an excellent vaccine cicatrix, was admitted to the sick-list with fever, which proved to be smallpox. On the 17th of July, nineteen days after the seizure of the first, a second case occurred, which was immediately sent to the quarantine hospital at Flushing. On the 18th seven, and on the 19th sixteen, cases were sent on shore, and the ship was placed in strict quarantine. July 25 the number of cases reached 58. None occurred subsequently. The ship was released from quarantine August 2.

Rear-Admiral Radford, in a letter to the Department, dated Flushing, August 8, especially calls the attention of the Secretary to the praiseworthy conduct of Surgeon Turner, in hastening to the relief of the sick and assiduously devoting himself to their care and comfort. The Secretary thus recognizes the surgeon's services:

"NAVY DEPARTMENT, WASHINGTON, Aug. 31, 1870.

"SIR,—The Department has received and noted with great pleasure the special reports of Rear-Admiral Radford and of the Fleet Surgeon of the European Squadron, in relation to your very meritorious and valuable conduct and services during the prevalence of the smallpox among the crew of the Franklin, while lying at Flushing, Holland. The devotion exhibited by you in leaving the routine duty of your own ship and volunteering for this important and dangerous duty, and your marked attention and efficiency in the discharge of it, deserve and will receive the sincere commendations of the service and of the country; and in such conduct and devotion is found the true glory of your profession and the highest dignity of its members. You will please accept herewith the thanks of the Department and the assurance of my personal appreciation and regard.

"Yours, very respectfully,

"GEORGE M. ROBESON, *Secretary of the Navy.*

"Surgeon THOS. J. TURNER, *U. S. Navy, U. S. Steamer Juniata, European Fleet.*"

Prompt recognition of the meritorious conduct of men employed in military service by the civil head of

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its administration is inspiring, and always satisfactory to them. To voluntarily risk life by exposure to the contagion of a loathsome and fatal disease for the purpose of rescuing its victims from death, or to sustain their hope, while suffering, by cheering words of sympathy, implies a courage no less sturdy and worthy than that which gives glory to him who leads or follows in the fight. Merit of this sort is not commonly acknowledged. Perception of it flows from a cultivated and refined intelligence; recognizing and inviting public attention to it evinces a degree of kindness and justice as well as of statesmanlike policy; but such official acknowledgment might well exceed the limits of mere compliment at a time when controversial relations exist between "the line" and "medical staff" of the navy, injurious to that spirit of brotherhood which should bind together men associated for a common purpose.

The just though long-pending claim of medical officers to a suitable rank in the naval service, in connection with their official degradation under the administration of the navy department by the Hon. A. E. Borie, renders the Secretary's letter to Dr. Turner especially noticeable. Mr. Robeson says:

"The devotion exhibited by you in leaving the routine duty of your own ship and volunteering for this important and dangerous duty, and your marked attention and efficiency in the discharge of it, deserve and will receive the sincere commendations of the service and of the country; and *in such conduct and devotion is found the true glory of your profession and the highest dignity of its members.*"

The praiseworthy conduct of medical officers in the discharge of their duty, which has cost many of them their lives, has been urged in support of their claim to a suitable rank. The words we have placed in italics imply that the true glory of the medical profession and the highest dignity of its members consist in self-sacrifice and devotion to the interests of others, and that when they achieve the highest degree of worthiness, and stand conspicuous in the true glory of the profession, their only reward should be an honorable mention of their conduct. In the opinion of the Secretary, the conduct of Surgeon Turner is worthy of the "commendations" of the naval service; but he also seems to think that members of the medical corps of the navy should be content to win such "commendations," and not aspire to more substantial acknowledgment of any achievement worthy of general approbation, thus imposing on them a practical application of the aphorism, "Virtue is its own reward."

A comparison of the Navy Registers of two years may enable us to estimate the value of the "sincere commendations of the service" to medical men in it.

In the Navy Register of January 1, 1869, the name of Thomas J. Turner, of Pennsylvania, is enrolled twenty-first on the list of "surgeons ranking with commanders;" and in that of January 1, 1870, it is placed below all the commanders and all the lieutenant-commanders, thirteenth on the list of "surgeons ranking with lieutenants."

This sweeping degradation in rank of Dr. Turner, and of all other medical officers, was accomplished through the representations and agency of officers of the line of the navy, whose "sincere commendations," the Secretary suggests, are reward enough for any efforts a surgeon may make to preserve the health and prolong the lives of the very men who are banded together not only to humiliate him in his own estimation as well as in that of the naval service generally, but also to prevent any legal recognition of the claims of medical men to a positive rank or relative position in the officiality of the navy. The Secretary estimates the praise of the line of the navy at a much higher value than it is intrinsically worth to gentlemen who are frequently made to feel the offensiveness of polite condescension and the arrogance of superior caste—not of mere official superiority—by their comrades in a perilous service.

The tone of this communication to Dr. Turner, kind and graceful as it is and was designed to be, in recognizing his merits, is calculated to foster the caste prejudices of the line against the staff. We notice, too, that the fleet surgeon of the European squadron has no more individuality than "the man on the lookout" or the ship's cook, although his report in the case is as authoritative as that of the commander of the squadron, who is conspicuously named.

May we hope that Congress, early in its approaching session, will enact some measure calculated to remove all reasonable grounds of difference on the question of rank of medical officers in the navy, as well as to retrieve for medical service in the navy its lost popularity? Until the question is definitely settled, it will be difficult, if not impossible, to fill the many vacancies in the medical corps with physicians properly qualified to be intrusted with the care of officers and men in the naval service when prostrated by disease or wounds.

THE army correspondents of the London *Lancet*, *Medical Times and Gazette*, and other serials, seem to have had a difficult task to answer the expectations of their employers, and to gratify the popular demand of the profession for fresh information from the battle-fields and hospitals of France. One of these journals has had five of these itinerant seekers after novelty picking up notes of the war from every ambulance met with in their peregrinations, and from every hospital to which they succeeded in gaining access; and yet there is a general complaint of the infrequency and insufficiency of their letters. One or two of these gentlemen were compelled to waste time and money in Paris, endeavoring to become connected with somebody's or anybody's army corps, and, when successful in this preliminary step, were placed on professional duties so engrossing that they could find but little time for correspondence. Then they found that all the acceptable cases either never reached them or passed them by, or, perhaps, were transferred elsewhere just as they were becoming interesting, so that their history could not be studied to a successful or a fatal issue. Some of them tried to get casts of cases and faces with

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plaster of Paris, but it would not "set," although it had been sent to the hospital for the treatment of fractures. To add to all this, the medical attendants were suffering most of the time from deficiency of food.

CORRESPONDENCE.

LETTER FROM WHEELING, W. VA.

FROM JAMES E. REEVES, M.D.

WHEELING, October, 1870.

THE city of Wheeling, which I wish to introduce to the readers of the TIMES, is a flourishing but smoky place, with twenty thousand inhabitants and numerous manufactories; nineteen regular physicians and surgeons, two eclectics, four homœopaths, including one female votary, and one water-cure doctor, who, as a successful money-changer and man of science (!) in the temple erected to the Unknown God, is perhaps not less respectable and useful to suffering humanity than his more presumptuous co-worshippers, the homœopaths, so-called eclectics, mesmerisers, spiritual rappers, *et id genus omne*.

I have said Wheeling is a smoky city; and the remark is so true that strangers coming into it (unless they come from Pittsburg, ninety-one miles farther up the Ohio River) are quite sure to make the mistake in thinking every day is going to be rainy, until they have remained long enough to learn that the murky, sooty atmosphere, which is sometimes so disagreeable when the many furnaces are in full blast and the air still, is the faithful representative of the business prosperity and wealth of the city; and, high above all, that it is not in any wise detrimental to health, as is unmistakably shown by a remarkably low death-rate, and the comparative infrequency of pulmonary affections.

In 1869 the total mortality, including still-born, amounted to 279,—a smaller number than had been recorded in any one of the eleven years next preceding; and for the nine months ending September 30, 1870, there was the small *total*, including premature and still births, of 207, the average monthly mortality being 23, or a fraction above 13 to every 1000 of the population annually. Indeed, the death-returns for the past eleven years show conclusively that with the growth of the city and the yearly increasing number of manufactories there has not been a corresponding increase in the deaths from consumption. For example: in the year 1854 there were 45 deaths reported from this cause; in 1855, 51 deaths; in 1856, 58 deaths; in 1861 (a skip of four years), 41; in 1862, 36 deaths; in 1863, 35 deaths; in 1864, 37 deaths; in 1865, 37 deaths; in 1866, 29 deaths; in 1867, 34 deaths; in 1868, 36 deaths; in 1869, 30 deaths; and in 1870 (9 months), 18 deaths.

This statement is in happy contrast with the returns from the manufacturing districts in England, Ireland, Scotland, and Wales; and the difference is scarcely less apparent when compared with the returns from New England manufacturing towns. The mortality from the disease in Wheeling is even less than occurs in the most salubrious country districts of the State,—in a word, the city is healthier in this respect than the country.

A little less than two years ago, a permanent Health Office was created, and a wise and most praiseworthy encouragement has since been given by the municipal authorities to the enforcement of sanitary measures. By a humane and liberal policy, the people generally have become interested in, and learned something of, the economic and political importance of the study of *preventive medicine*; and all classes have enjoyed, in return for their discipline, a wealth of health not exceeded, I believe, by any city of the same size in the United States.

Another of the diseases which is neither so frequent nor so fatal as it was in past years—say fifteen or twenty years ago—is croup. Knowledge of the marvellous virtues of *hydrargyri sulphas flava*, if generally diffused, might account for the diminished *mortality*, but certainly not for the late *infrequency* of the disease. In 1856, when diphtheria was generally prevalent in Wheeling, and pretty well recognized by the profession, the number of deaths from croup was fifteen; since then the annual mortality from the disease has varied from one to seven. Last year but one death was reported from this cause, and but a single case has occurred thus far in 1870.

In my early experience in the practice of medicine I saw more or less of the disease—*genuine* croup—every year; now it has become such a stranger that I wonder what has become of it and what has produced the change. It cannot be said to have been supplanted by diphtheria, as was the old-fashioned "bilious remittent fever" by the enteric or typhoid form since 1832; for the two diseases diphtheria and croup, which are unlike in many essential particulars, have figured at about the same small rate in the mortuary returns during the last five or six years; though in everyday practice it has at least been my own experience that diphtheria is far more commonly met with than croup. And, further, I have found that the former is *almost* as manageable by the use of the chlorine and iron mixture (℞ Chlor. pot., ʒij; Acid. Hydrochloric., ʒiss; Aquæ, ℥vij; Tinct. ferri chloridi, ℥i. M.) as a gargle or atomized spray, every hour or two when the patient is awake, as well as internally administered in teaspoonful doses every three hours, with the addition, if need be, of sulphate of quinia, a good diet, and the recumbent posture, as croup has been declared to be by *turpeth mineral*—or the wasting disease of infants by *inunctions* of cod-liver oil and the internal use of subnitrate of bismuth—notwithstanding the assertion once made by a self-styled and very doubtful oracle that "the mother is a fool who would subject her child to such filthy treatment." Of course, Eustace Smith's excellent book had not then been heard of, nor poor, starving, wrinkled, withered infants been rescued from the grave by the almost magical influence of this greasy mode of treatment; therefore "the times of such ignorance" should be winked at.

The medical profession of West Virginia is slowly moving into successful working line. In 1867, as the result of the labor of a few individuals, a State Medical Society was instituted at Fairmont, and has gone on prospering in spite of very adverse winds. It now embraces a majority of the best men in the State, and will live to amply reward its industrious Fellows. Auxiliary to the State Society, and to cover a blank which had unfortunately existed for several years, the "Wheeling and Ohio County Medical Society" was established in 1868, but, notwithstanding its county name, is yet composed entirely of city members. It, too, has had its singular trials and remarkable experiences, but is gradually overcoming their effects and doing lasting good in the way of levelling *up* and levelling *down*, as the individual case requires.

I am sorry we cannot boast of a becoming public charity

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for the sick poor. The city has nothing of the kind in keeping with either the intelligence, wealth, or accustomed liberality of its citizens; and but for the benefits presented by the Wheeling Hospital,—a private enterprise, under the direction and good management of the Sisters of Charity,—we should have the discredit of being without even the name of such an institution. A new county almshouse, situated six miles from the city, is now being erected, and will, when completed, prove a godsend to the poor of both county and city; but it will not by any means (though we have to pay seven-tenths of the bills) fill or accommodate the severe want of a city infirmary, nor of a house of correction for the government of the almost incorrigible boys and girls that are running at large in the streets and to ruin. The Insane Asylum at Weston, a State institution, one hundred and twenty miles south of Wheeling, and upon which have already been expended enormous sums of money, is not yet completed, and probably will not be finished for several years to come, for which reason there are many insane persons at present confined in the narrow, dismal cells of the various county jails throughout the State, and treated as felons! Even in the city of Wheeling there are now confined in wretched prison-cells three or four of these unfortunate people, of both sexes. Surely, sentence to the State prison at Moundsville would be a thousand times more humane disposition of them.

TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

CONVERSATIONAL MEETING held September 28, 1870, at 8 P.M. Dr. Wm. H. Pancoast, President, in the chair.

In reply to an inquiry as to the relapsing fever which has been prevalent in the lower section of the city, Dr. Welch (attending physician of the Municipal Hospital) remarked, "Since I have had charge of the hospital, now about one month, twenty-five cases of this fever have been admitted. During the summer some hundreds of cases were treated by my predecessor. The vast majority have been from the southern section of the city and from the squalid poor. As they present themselves, they are in all stages, from the inception of the fever to the relapse. We find, on inquiry, that they have been suddenly attacked with a chill, followed by fever. This first stage, or that of the first pyrexia, continues about one week, during which the pulse varies from 90 to 140. The tongue is heavily coated in its centre, with clean, red edges and tip. This coating is white and moist at first, but as the disease progresses it becomes yellowish, and sometimes brownish. I have rarely found well marked that clean triangular space at the end of the tongue, which has been described by some authors.

"A yellowish hue of the skin and of the white of the eye is sometimes observed in white patients; but in negroes I have found well-marked yellowness of the eyes uniformly present.

"Irritability of the stomach and epigastric tenderness are frequently seen. Tenderness over the region of the spleen is common. Muscular pain is a very frequent attendant, especially about the neck and shoulders.

"The skin is hot and dry at first, but for from twenty-four to forty-eight hours prior to the cessation of the pyrexia, a profuse perspiration generally occurs. The pulse now falls suddenly to its normal standard, or even below.

"This second stage, or intermission, continues about one week, the patient being free from fever; the tongue is clean, appetite returns, he walks about and believes himself convalescent. But on or about the fourteenth day from the onset of the disease, all the symptoms return, though in a milder form.

"This third stage, or relapse, does not last, on an average, more than three days. The intermission again occurs, and convalescence rapidly ensues. Another relapse may occur, but, in my experience, this is not frequent.

"The negro is much more profoundly impressed by the disease than the white, and the mortality is correspondingly greater. With my limited experience, I do not feel myself able as yet to diagnose the affection with certainty in its earliest stage. There are certain circumstances which may suggest the nature of disease, as the residence, the heavily coated tongue with red tip and edges, and the muscular pain; but the relapse is, above all, the distinguishing symptom.

"I have had two deaths, both negroes. In one an autopsy was obtained. He died under circumstances somewhat indicating yellow fever. A few hours before death, he vomited a black grumous matter, and was without pulse at the wrist, though able to sit up. Soon this black vomit largely increased. Drs. E. Harris, of New York, and R. La Roche, of Philadelphia, were present at the examination. The liver was somewhat fatty, and was believed to be a 'whiskey liver.' The stomach was congested, and the spleen enlarged, weighing eleven ounces. This, with his history, and the absence of the lesions of the liver and stomach found in yellow fever, sustained the diagnosis of relapsing fever.

"The treatment has been simple,—a febrifuge of solution of acetate of ammonia, with spirit of nitric ether and antimonial wine, turpentine when the tongue was dry, and stimulants if required. In the intermission, quinine only as a tonic. In a few cases, where there has been much jaundice, I have used calomel with benefit."

Dr. A. Douglass Hall inquired as to its resemblance to typhoid. He had seen one case in consultation, which at first sight reminded him of a mild typhoid.

Dr. Welch had not been so impressed. The absence of diarrhœa and nervous disorder, the typhoid tongue, iliac tenderness, and tympanites, excluded the idea of typhoid fever.

Dr. Atkinson asked for the differential diagnosis between relapsing fever and a severe case of bilious remittent.

Dr. Welch.—"The more persistent bilious vomiting, and the remissions and exacerbations every day or every other day, characterize bilious remittent, while relapsing fever pursues the course above detailed."

Dr. Buck had seen a number of cases in the southern part of the city. He had noticed violent headache, and great irritability of the stomach. The relapse occurred on the seventh and fourteenth days; in the latter case it was very severe. He paid great attention to nutrition, employing injections of beef tea, with pepsin and dilute muriatic acid, when the stomach was very irritable. He relied greatly on quinia. He had lost no cases. In conversation with Drs. W. Pepper and Shapleigh, he had been informed that they found small yellowish deposits in the parenchyma of different organs.

In this connection he would mention a singular case, which proved not to be relapsing fever, where at twelve o'clock nearly every night the patient, a boy seven years old, became insane; the insanity would pass off in the morning. At the end of two weeks death ensued. The bowels were regular, appetite good, no cough, no tympanites. He thought it a case of malarial fever.

Dr. Atkinson, though constantly attending cases throughout the infected district, had not seen a case of true relapsing fever. He had encountered several cases of fever which presented symptoms indicating such an attack, but were of an ephemeral nature, none lasting more than two or three days, and none suffering a relapse.

He mentioned a case which had just occurred in close proximity to the recent cases of yellow fever. It was marked by profuse epistaxis, frequently renewed, intense cephalalgia, great muscular pain and prostration, but with complete intermissions in the febrile movement. The patient rapidly convalesced under the exhibition of antiperiodic doses of quinine.

Dr. Fish narrated two cases, which tended to establish the contagious character of relapsing fever. He would ask Dr. Welch if his experience and observation at the Municipal Hospital had confirmed the contagiousness of the disease.

Dr. Welch had seen no case directly traceable to contagion.

Dr. Wittig made some remarks in regard to the fact that in many morbid conditions there is a tendency to occurrence of a relapse, soon after the primary attack, on re-exposure to the exciting cause.

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OBITUARIES.

THE cause of Chemistry in London has recently suffered from the loss by death of two of its most distinguished exponents. DR. WILLIAM ALLEN MILLER, LL.D., F.R.S., Professor of Chemistry in King's College, died early in October, at the age of 52. He was a pupil of Liebig in his younger days, and, after being for several years assistant to Prof. Daniell, succeeded him in 1845 in the Professorship. His "Elements of Chemistry" passed through three editions. At the time of his death he was Vice-President of the Chemical Society, Treasurer and Vice-President of the Royal Society, Assayer to the Mint and Bank of England, etc.

DR. AUGUSTUS MATTHIESSEN, F.R.S., F.C.S., Lecturer on Chemistry at St. Bartholomew's Hospital, was found on the 6th of October seated at a table in his laboratory, with a bottle of prussic acid and another of urate of ammonia near him, with which he had probably been experimenting. He seemed to be asleep, but had doubtless been dead several hours. He was only forty years of age, but, though young, had distinguished himself by numerous valuable researches on specific gravity, effect of temperature on electric conducting power, etc., for one series of which he received the Royal medal. He elaborated experiments leading to improvements in copper wire for telegraphic purposes, especially for submarine use. He was also successful in his inquiries in the more profound fields of organic chemistry. He proved, among other results, that when morphia and codeia are acted upon by hydrochloric acid, a new base, called by him apomorphia, is formed, which is a very decided emetic.

REVIEWS AND BOOK NOTICES.

OPPOLZER'S VORLESUNGEN ÜBER SPECIELLEN PATHOLOGIE UND THERAPIE. Bearbeitet und herausgegeben von DR. EMIL RITTER VON STOFFELLA, emeritrten klinischen Assistenten und Privatdocenten an der k. k. Universität in Wien, etc. Erlangen, Verlag von Ferdinand Enke, 1868. (Oppolzer's Lectures on Special Pathology and Therapeutics. Prepared for publication and edited by Dr. Emil von Stoffella, Emeritus Clinical Assistant and Lecturer at the Royal Imperial University of Vienna.)

Prof. Oppolzer's reputation as a clinical lecturer is so deservedly great in Germany, that regret as well as surprise is excited by the fact that up to the time of the publication of the present work he has chosen to confine the benefits of his teaching in great measure to the medical class at Vienna. At this moment we cannot call to mind the name of any other physician equally celebrated as a teacher who has written so little. On this account it may be that Oppolzer is so little known in this country, or that his fame is at most a reflected one. In Germany, however, it is different, and any one who has followed for a winter, as has the writer of the present notice, his course of bedside instruction, will be only too glad to confirm the favorable opinion of his merits which is universal there. The book, only part of which has reached us, is, as the title tells us, *elaborated* (*bearbeitet*) by Dr. Stoffella, a gentleman who a few years ago occupied the position of clinical assistant to Prof. Oppolzer, and consequently has had abundant opportunities for becoming familiar with his views on pathology and his method of treatment. Dr. Stoffella, we are glad to say, has not neglected his advantages, and has shown himself well qualified for the performance of the duties of an editor. Having heard Oppolzer lecture, we are in a position to judge, at least in part, of the accuracy with which his lectures have been reported, and can truly say that, with the exception of the necessary elaboration they have received at the hands of the editor, they are very faithful transcriptions of the original. As much of the success of a teacher depends upon the manner in which he imparts his information, a written lecture will scarcely ever be quite so instructive as an oral one, and thus it may happen that the reader may fail to find in these lectures, admirably reported as they are, the charm which always crowds Oppolzer's lecture-room and wards. Still, we think that any one who is master of the German language will derive from the reading of these lectures both pleasure and instruction, and will never regret the time so spent.

It is evident that the work when completed will be voluminous, and doubtless expensive. But three parts have reached us, and of these the first two, containing three hundred and seventy-four pages octavo, are entirely devoted to a consideration of Diseases of the Heart and Blood-Vessels, and the third breaks off abruptly in the middle of Diseases of the Lungs. The price of the work, as issued in parts, will probably prevent a general sale of it in this country; but, if the unpublished parts are at all equal to those in our possession, the whole will form a very valuable addition to a medical library.

Regretting extremely that the narrow limits assigned us do not enable us to give a complete review of the book, or to speak as much in detail as we should like, of the very admirable descriptions of diseases it contains, it is our purpose in the present notice to call attention to a few points, principally in diagnosis and treatment of diseases of the heart, which have struck us as novel. Prof. Oppolzer's method of handling his subject does not differ materially from that common among German authors, each subject being fully treated of by itself, and every disease examined in all its bearings,—the causes, pathological anatomy, symptoms, course, diagnosis, prognosis, and therapeutics being in each case fully discussed. It might and probably will be objected to this plan that it involves a good deal of repetition; and so it does; but there are counterbalancing advantages not to be overlooked. If required to indicate the best part of the book, we would unhesitatingly select the articles on the symptoms and differential diagnosis of the several diseases. The minuteness of the descriptions, which is certainly carried further than is often seen in the writings of either French or English authors, may, it is true, weary the general reader; but, on the other hand, we are sure their accuracy will delight the careful student and often afford essential aid to the practising physician. We do not find the evidences of quite so much familiarity with the works of foreign authors as we should have expected and should like to have seen. There are certainly not more than half a dozen references to English authorities, and about the same number to French.

The diseases of the heart and blood-vessels are of course very fully discussed,—endo- and pericarditis, hypertrophy and dilatation, valvular disease and aneurism, most fully so. As diagnostic signs of especial value in pericarditis, we find the two following,—extension of dulness to the left of the impulse, and a change of the seat of a murmur consequent upon a change of position on the part of the patient. Both of these signs are to be expected from the nature of the disease, and we can, of course, have very little doubt of their existence in most cases; but many works on auscultation and percussion do not call attention to them. No allusion, however, is made to the fact of the less frequency with which pericardial murmurs are propagated in the course of the large arteries than endocardial. The author evidently holds that the sounds of the heart are due to vibration of the valves, and, with Skoda, believes that there is an arterial first sound, independent of the cardiac, and due to the vibrations of the walls of the arteries. There are few among either practical or theoretical physicians at the present time who do not refer the production of the cardiac sounds principally to the vibrations of the valves; but we are not ready to admit that the explanation given by Oppolzer of the causation of murmurs will be quite so readily adopted. While it is held that regular vibrations of the valves and walls of the arteries give rise to sounds, their irregular vibration is said to be almost the sole cause of murmurs, and this sometimes even in cases in which the murmur is of the so-called obstructive character. Thus, in speaking of aortic constriction, the author says that very frequently the segments of the semilunar valves are, in consequence of thickening or induration, unable during the systole of the heart to apply themselves closely against the walls of the aorta, but assume a position perpendicular to the orifice, and are put into vibration by the blood as it flows past them. He admits that in those cases in which the valve is so rigid as not to be capable of vibration this explanation will not suffice, and assigns increased friction as, under these circumstances, the cause of the murmur; but the latter he evidently thinks a much less constant source than the

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former. The frequent absence of aneurismal murmurs is satisfactorily accounted for, he thinks, by this theory. If the walls of an aneurism admit of regular vibrations, a sound is produced which may even be more intense than normal; and it is only in those cases in which the vibrations are irregular, or the aneurismal sac presses upon the artery, that a murmur is heard. The presence of a systolic sound in the small arteries is a very frequent accompaniment, and is regarded as a valuable sign of hypertrophy of the heart, indicating, as it does, increased vibrations caused by the exaggerated pressure of the blood in vessels the coats of which are generally themselves hypertrophied.

The metallic clang, which is another attendant upon hypertrophy or of an excited action of the heart, is attributed to the vibrations of the rib against which the enlarged or excited organ impinges. Great, perhaps undue, diagnostic importance is attached to the *accentuation* of the pulmonary second sound in distinguishing systolic murmurs originating at the mitral orifice and accompanied by regurgitation, from those simply dependent upon anæmia or upon loss of elasticity of the leaflets of the valve. He concedes, however, that an accentuation of the second sound over the pulmonary artery frequently accompanies an excited action of the heart, and is not uncommon in anæmia and chlorosis.

Less reliance than is usual is placed by Prof. Oppolzer upon the signs furnished by any one of the methods of physical diagnosis. Much care is evidently taken to impress upon the student how fallacious are the signs furnished by auscultation, for example, if not confirmed and compared with those obtained by percussion; and we do not recollect to have met with anything more admirable than the manner in which the whole subject of the differential diagnosis of valvular diseases is treated. Mitral disease, if the lesions are not very aggravated, is said to be compatible with long life and moderate comfort, more so than disease of the aortic valve,—an opinion which differs from that generally held on this point. We do not find the liability of the subjects of aortic incompetency to sudden death alluded to.

The treatment adopted in diseases of the heart and blood-vessels does not differ quite as much from that common in this country as might have been supposed, except in the use of digitalis. Unless we are in error, the view which is generally held here in regard to the action of this drug, in the doses ordinarily administered, is that it is tonic and stimulant. Oppolzer, however, adhering to the older view, looks upon it as essentially sedative in its operation, and cautions us against its exhibition in any case where there are positive indications of debility of the central organ of circulation, as it will, under these circumstances, occasionally accelerate death. He advises its use only when vigorous contractions, loud sounds, a full and strong pulse, and absence of lividity proclaim undiminished power. An exception in favor of its use is made in cases of aortic insufficiency complicated with contraction of the orifice. In such cases, even if the pulse be small, it may be given whenever the action of the heart is excited, as it has been demonstrated that less blood is regurgitated when the beats are reduced in frequency, and at the same time a due amount of blood is sent into the aorta at every systole. Digitalis is also recommended for the relief of hæmoptysis, as in this condition all remedies which reduce the force of the circulation will be of service.

The remedies most frequently employed in inflammatory affections of the heart or its membranes are cold, venesections, and quinia, the use of the last-named remedy being recommended in conditions in which we are told to avoid digitalis. Ice or cold dressings are to be used in the early stage of inflammations, and bleeding whenever there are evidences of venous congestion, or of increased pressure of the blood in the arteries, manifesting itself by the presence of high fever, pain in the head and breast, together with a feeling of oppression or want of air.

The operation of paracentesis of the pericardium is of course alluded to, but is scarcely recommended, and is not thought to present the same chances of a favorable result as the analogous operations in hydrothorax and ascites, and for the following reason. The pericardium, when distended, shows little tendency to contract, and, as the vacant space cannot be occupied by an expansion of the lungs, the blood-vessels of the sac are deprived of the support to which they have been for a long time accustomed, and are very liable to rupture and to permit the escape of blood. Blisters are not to be used in the early stages of inflammation, as they cause an increased attraction of blood, but are sometimes useful later for the relief of pain, after symptoms of irritation have disappeared. Diuretics may be used to promote the absorption of the effusion in pericarditis, if the kidneys have been previously ascertained to be in a healthy condition. The failure of one diuretic to increase the secretion of urine should not be regarded as an evidence that this class of remedies is not indicated, as frequently success will follow the use of another. Diaphoretics are, on the other hand, to be sedulously avoided in all inflammatory diseases, as they almost invariably cause an increased action of the heart.

BOOKS AND PAMPHLETS RECEIVED.

From the Surgeon-General, U.S.A.

Catalogue of the Army Medical Museum. 2 vols. 4to.

Circulars Nos. 1, 2, 5, 6, and 7, Surgeon-General's Office.

Report to the Surgeon-General, U.S.A., on Certain Points connected with the Histology of the Minute Blood-Vessels. By Brevet Lieutenant-Colonel J. J. Woodward, Assistant Surgeon, U.S.A. Washington, D.C., 1870. 4to, pp. 8, with 10 photo-micrographs.

Transactions of the Medical Society of the State of Pennsylvania. Sixth Series, Part I. Philadelphia, 1870.

Lunacy, its Past and its Present. By Robert Gardiner Hill, F.S.A. 8vo, pp. 109. London, 1870, Longmans & Co.

Physician's Prescription Record. Philadelphia, S. W. Butler, M.D., 1870.

Notes on Chemical Theories. By B. Howard Rand, M.D., Philadelphia. 8vo, pp. 4.

Bumstead on Venereal Diseases. Third Edition. H. C. Lea, Philadelphia, 1870. 8vo, pp. 704.

GLEANINGS FROM OUR EXCHANGES.

CAUSE OF INTERMITTENT FEVERS. (Considérations générales sur l'Etiologie des Fièvres intermittentes. By M. LÉON COLIN. *Arch. Gén. de Méd.*, Jan. 1870, p. 5.)—This article, which is abridged from a work just published, by Colin, on intermittent fevers, is devoted to a thorough discussion of the causes which have been assigned to these affections.

He points out that, although marshes furnish the most favorable condition for the development of malarial disease, the immense geographical domain of these fevers shows that the comparatively limited marshy tracts cannot serve as their exclusive cause. Thus, there are many localities, both in tropical and temperate climates, where severe malarial fevers occur without the presence of marshes, merely from the upturning of a virgin or fallow soil. The attempt has been made to explain such cases by asserting the existence of subterranean marshes; but, although these do exercise an undoubted influence, Colin regards them as comparatively inert.

He next considers, at some length, the Palmella theory of Salisbury, of Ohio, and, while not denying the existence of such sporules in the earth examined, or even in the sputa and urine of fever patients, he considers it far from proved that they have anything to do with the production of malarial diseases.

The great majority of authors consider that these fevers are caused by the emanations resulting from the decomposition of vegetable matters. Colin, however, while acknowledging the important part which this decomposition plays, regards as the chief cause of malarial fevers the *vegetative power of the soil when not utilized by culture*. He believes that this febrigenous principle resides in the gases which the upper layers of the soil have been shown to contain in such abundance. This gas is suddenly set free after a long period of accumulation and condensation, when the soil is broken up by the laborer. In some regions the natural porosity of the soil permits its

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escape. Instead of the term *marsh miasm*, therefore, he employs that of *telluric miasm* or *intoxication*, as more expressive of the full state of the case.

CHEMICAL FOOD.—At a recent meeting of the Académie des Sciences (*Chemical News*, Sept. 30, 1870, from the *Comptes Rendus*, Sept. 12, 1870), M. Rabuteau brought to notice a form of food on which, as he has proved by actual experience, a man may live for months, retaining his health and strength, and without other food. It is in the form of a dry powder, and consists of—powdered cocoa, 1000 grammes; sugar, 500 grammes; and of infusion of coffee, 500 grammes; infusion of tea, 200 grammes; the two infusions having been made as strong as possible, and, before incorporation with the other ingredients, having been evaporated to dryness. When completed, the weight will be about 1600 grammes. Of this 150 grammes are to be taken daily, mixed with boiling water, and, in the opinion of the author, it will be found as agreeable as it is life-supporting.

POLYURIA IN SOME FORMS OF CHRONIC RENAL DISEASE. By Dr. J. M. FINNY, in Trans. of Med. Soc. of Coll. of Phys. of Dublin, in *Dubl. Quart. Jour.*, No. 98, May, 1870, p. 433.—The author, in the first place, refers to the unsatisfactory nature of the various theories which have been advanced to explain the great increase in the amount of urine frequently noticed in albuminoid and granular degeneration of the kidneys.

He assumes that the medullary portion of the kidney, consisting, as it does, of tubuli uriniferi, both looped and straight, will receive, through the vasa recta, a considerably greater supply of blood, in all instances where the cortical intertubular region is impaired and the Malpighian capillaries obliterated, than in a state of health, or in those morbid states where the disease is principally confined to the epithelial lining of the tubes, as, for example, in acute or chronic desquamative nephritis. He repudiates the theory of the kidney being a mere filter of either solids or fluids, and believes that the water is as much a secretion as the solids, and that it is separated by the epithelial investment of the tubes. Accordingly, so long as the obstruction to the cortical circulation lasts, the blood will flow in a very full stream through the vasa recta, and a rapid and large secretion of watery urine will take place in the cones.

In addition to the obstruction to the circulation in the cortex, further elements favoring the large secretion of watery urine are found in the hydræmic state of the blood and the increased *vis a tergo* due to the hypertrophy of the left ventricle of the heart so frequently found in cases of contracted granular kidney.

In the amyloid kidney, polyuria is more easily accounted for; for, besides the compensatory action which the medullary portion of the kidney takes on it, it is probable that, through the Malpighian or other capillaries, a transudation of albuminous fluid takes place, similar to the profuse watery diarrhœa we occasionally observe in the more advanced stages of the disease.

ATROPHY OF THE NERVE-CELLS OF THE MEDULLA AND THE PONS.—MM. Duchenne (of Boulogne) and Joffroy (*Archiv. de Phys.*, No. 4, 1870) give a résumé of the pathological anatomy of the nerve-cells that is of more than usual interest. Three diseases, progressive muscular atrophy, labio-glosso-laryngeal paralysis, and atrophic infantile paralysis, formerly believed to be muscular, are now proven to be due to one and the same anatomical lesion,—alteration in the nerve-cells, producing their atrophy with a tendency to their utter destruction.

Clinically, these cases can be divided into two classes:—1. where the atrophy of the cells is acute, *e.g.* atrophic infantile paralysis; 2, where it is chronic, *e.g.* progressive muscular paralysis of the adult. In the first the paralysis attacks suddenly or very rapidly a number of muscles, of which, in time, some recover their functions; but in the second the symptoms, slight at first, become gradually worse, are often stationary for a time, it is true, but do not disappear, and never even retrograde. The second form is often hereditary, the first is not; the second is most frequent in adults, the first in children.

But each of these two forms of disease can be further subdivided, according to the age at which it appears. Acute atrophy of the nerve-cells has (*a*) a common form seen in infants,—atrophic infantile paralysis; (*b*), a much rarer form, seen in adults,—atrophic adult paralysis (see the third edition of Duchenne's "Electrisation Localisée"). Chronic atrophy of the nerve-cells reverses the rule, being very common in the adult, but much more rarely seen in childhood, where it appears only as a hereditary taint. But in this chronic atrophy it is not sufficient to distinguish only the ages at which the disease appears, but also the cases in which alteration attacks the cells of the medulla and pons universally, and those in which it is localized in a particular region. Accordingly, we distinguish the following forms:

(*a*) The medulla is the first point invaded, when the muscles of the trunk and extremities will be affected; but these troubles, not being fatal, will permit the lesion to extend frequently first to the nuclei of the hypoglossal and facial, and then to those of the spinal accessory and pneumogastric. When the disease attacks the two last-named nuclei, the disease becomes rapidly fatal from respiratory and circulatory troubles.

(*b*) Not rarely the disease begins in the floor of the fourth ventricle, in the hypoglossal and facial nuclei, the muscular troubles being then in the tongue and lips, and extends, as before, to the spinal accessory and pneumogastric.

(*c*) In this form the atrophy of the nerve-cells develops itself everywhere at once, but death is produced as before.

Progressive muscular paralysis corresponds generally to the form (*a*); glosso-labio-laryngeal paralysis, to the form (*b*); and Charcot's case (*Archiv.*, No. 3, 1870), to the form (*c*).

In the form (*a*) the disease generally begins in the cervical enlargement of the cord, and the first symptom is atrophy of the muscles of the thenar eminence, followed by atrophy of other muscles. The muscles waste away, but are never paralyzed.

In the form (*b*), where the hypoglossal is first affected, the muscles of the tongue are paralyzed without any wasting, and, after all voluntary movement is abolished, galvanization will still act on the muscles. This suggests the idea that there may be motor cells and trophic cells, whose separate destruction may cause these various forms. A detailed case of glosso-labio-laryngeal paralysis, with autopsy and careful microscopic examination, follows.

SIZE OF THE CHILD IN RELATION TO THE MORTALITY FROM PARTURITION.—In an elaborate work on the "Proportion which exists between the Size of Children and their Vital Resistance in Normal Parturition," M. Villeneuve (*Pacific Med. and Surg. Journal*) has established the facts that the number of large male children is greater than of female, and that the number of deaths of mothers in childbed is the more rare in proportion as the children are larger. The explanation, of course, is that the largest children denote the healthiest mothers and those best capable of enduring childbirth and its perils.

EXPERIMENTAL RESEARCHES ON THE PRODUCTION OF ALBUMINURIA BY INJECTION OF NITROGENIZED SUBSTANCES INTO THE BLOOD. M. G. CALMETTES (*Arch. de Physiologie Norm. et Path.*, 1870, No. 1, Jan., Feb., p. 26).—As the result of numerous experiments, by injecting solutions of casein, albumen, and gelatin into the blood, the author concludes:

1. That soluble nitrogenous organic substances, introduced into the circulation by injection into the veins, usually tend to escape from the economy by the urinary passages.

2. That their passage through the kidneys causes a temporary irritation of those organs.

3. That the result of this irritation is the temporary presence in the urine of albumen from the animal's blood, and that this albuminuria may persist for some time after the complete elimination of the injected material.

EXCISION OF THE ULNA.—Dr. C. S. Muscroft, of Cincinnati (*Cincinnati Lancet and Observer*, August, 1870), reports a case of excision of the entire right ulna, on account of traumatic caries, in a man forty-two years of age, as much as possible of the periosteum being left in the wound, which extended along the inner side of the bone, from one inch above the olecranon process to the same distance below the styloid process. With the exception of the frequent formation of abscesses near the wrist and elbow, the patient made a good recovery, and his condition one year after the operation is thus described: "With the exception of anchylosis of the elbow-joint, the arm

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is nearly as useful as it was previous to the injury which led to the exsection of the ulna, this result being caused by subsequent inflammation of the other bones of the joint, and not by the operation. There is, I think, some reproduction of the ulna, commencing at the elbow-joint and extending about three inches towards the hand. This latter circumstance may also have something to do with the anchylosis present."

IN the *Neues Repertorium für Pharmacie*, Bd. xix. Heft 5, Emil Werner shows conclusively that *Ricinin*, the alkaloid discovered by Tuson in the castor-oil bean, is no alkaloid, but a double salt of magnesia and potash, with some organic acid, probably one peculiar to the bean.

In the same journal, MM. Lucian de Koninck and Paul Marquart state that they have found a new nitrogenous neutral substance, bryonicin, in the roots of Bryonia alba. It is insoluble in cold water, solutions of lime or ammonia, and dilute mineral acids. Boiling water and strong muriatic acid dissolve it slightly; whilst alcohol, ether, chloroform, and benzole dissolve it readily. With strong sulphuric acid it rapidly produces a solution of a blood-red color.

OVARIAN TUMORS COMPLICATING LABOR.—After relating a case in point (*Dublin Quarterly*, May, 1870), Dr. George H. Kidd lays down the following rule in all cases of labor obstructed by tumors in the pelvis. Our first duty is to raise the tumor, if possible, out of the way; and if this cannot be done with the fingers, then we must place the woman on her hands and knees, with her head as low as possible, and introduce into the rectum and dilate with air the largest of Barnes' dilators.

LAW OF THE RELATIVE AREAS OF THE CARDIAC VALVULAR ORIFICES.—Dr. Herbert Davies (*Proc. Royal Soc.*, 1870, in *Brit. Med. Jour.*, April 23, 1870) has established a law regulating the relative areas of the cardiac valvular orifices, as deduced from the measurements of Peacock, Reid, and Bizot, in human hearts, and in those of the lower animals from his own. The ratios are as follows:

$$\frac{\text{Area of tricuspid}}{\text{Area of mitral}} = \frac{1.78 \text{ sq. inches}}{1.27 \text{ sq. inches}} = 1.4 \text{ nearly.}$$

$$\frac{\text{Area of pulmonic}}{\text{Area of aortic}} = \frac{1 \text{ sq. inch}}{.78 \text{ sq. inch}} = 1.3 \text{ nearly.}$$

One being known, the other can be calculated. The two ventricles send equal quantities of blood in equal times to unequal distances, overcoming unequal resistances by unequal forces. The size of their four orifices is in direct ratio to the force of the ventricle and the velocity of the stream,—both of these being small on the right side, while the orifices are large, and both being great on the left side, while the orifices are small. The blood passes through the tricuspid orifice at one-quarter of a mile per hour, but through the mitral at one and one-quarter mile per hour.

MISCELLANY.

THE late Sir James Clark was the President of the British Medical Benevolent Fund. It is perhaps surprising that the profession in this country have never taken much interest in plans of this kind; the only one known to us, in fact, being the "New York Physicians' Mutual Aid Association." We surmise that the reason may be found in the fact that for any such movement more is needed than mere general approval; the earnest efforts of a few men, deeply impressed with the importance of the cause, are essential to bring the matter to a focus of practical operation.

DR. WILLIAM MCCORMAC, Surgeon-in-Chief of the Anglo-American Ambulance Corps at Sedan, is one of the first to report the results of the gunshot wounds and operations of the present war. We need not stop to inquire how much of this ambulance system is "Anglo" and how much is "American;" nor is it necessary to give more than a passing glance at the current of egotism that pervades the whole communication (*Med. Times and Gazette*, Oct. 22, 1870, p. 486). Dr. McC., Dr. Sims, and the medical gentlemen associated with them, had treated 1193 patients, of whom 460 are placed in the report under the head of injuries, and classified as follows:

	Cases.	Deaths.
Gunshot wounds of the head, face, and neck	38	10
" " without penetration, of trunk	29	4
Penetrating wounds of chest	21	10
" " abdomen	3	3
" " pelvis	9	4
" " joints	35	21
Wounds close to and around joints, but not penetrating	25	1
Gunshot wounds causing fractures of bones and limbs	91	35
Gunshot wounds of extremities, without fracture	136	9
" " hand and foot	55	3
Sprains, burns, contusions, etc.	18	1

The surgical operations were of great variety and interest, as will be seen by the following table:

	Cases.	Deaths.
Disarticulation of joints, including 2 hip-joint and 3 knee-joint amputations	11	9
Amputations of limbs, including 14 thighs, 19 legs, and 2 double amputations	77	30
Resections of joints, 1 knee, 2 shoulder, 9 elbow, a double resection shoulder and elbow, and resections of long bones	15	7
Ligature of subclavian	2	2
" common carotid	2	1
" " femoral	1	1
" dorsalis pedis	1	0
(All for secondary hemorrhage.)		

Dr. McCormac considers the death-rate small, as the cases were of remarkable gravity; and these good results he attributes mainly to open windows and plenty of carbolic acid. About thirty of the deaths were from pyæmia, "which, however, was quite as common, if not more so, in the small houses and châteaux, with only a few patients in each, as it was in our larger establishment."

WE have received the announcement and circular of the Long Island College Hospital for the session of 1871. We were not a little surprised, upon opening the pamphlet, to find placed between the cover and title-page a circular of a quack doctor. It is surely a great piece of impertinence for a vendor of patent medicines to intrude his wares upon the public under cover of the announcement of a regular medical institution; and we would suggest to the gentlemen of the College Hospital the propriety of looking after their enterprising agent.

THE "Brixton baby-farming" case came to a righteous conclusion on the 11th of October, in the hanging of the culprit, Margaret Waters. Readers of the London papers and medical journals are probably familiar with the wretched details of this woman's crimes, elicited during her trial. She confessed to having caused, by neglect and the administration of unsuitable food, the deaths of a number of illegitimate children committed to her charge.

THE *Medical Times and Gazette* quotes a report that, among the war preparations of Russia, a military commission has been appointed at St. Petersburg to create a medical reserve force of one thousand surgeons.

A singular cause of death is mentioned in the same periodical:—"A child at the Newport Market Ragged Schools has been fatally burnt by sitting on a block of wood which had been sprinkled with carbolic acid. The school had been sprinkled with carbolic acid as a disinfectant. The child lived from Tuesday to Friday, and then sank from the severe burns and shock."

M. MILLIOT, a French army surgeon, is reported to have been killed on the field, just as he had succeeded in extracting a ball from a wounded officer.

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THE deaths from smallpox in Paris for the week ending September 3 are said to have been 148, in a total mortality of 1159; for the week ending September 10, they were 116, in a total of 981.

We have had no more recent information as to the prevalence of the disease. It is to be hoped that the epidemic has in some degree, at least, subsided, since that unfortunate city was placed in a state of siege.

DR. W. THOMSON has resigned the post of physician to the Episcopal Hospital, in this city. His successor has not yet been elected.

"LIEUTENANT VON LANGENBECK, a son of the eminent surgeon of Berlin, has died of wounds received in battle on the 18th of August. The only son and the son-in-law of General Staff-Surgeon Von Grimm were both killed before Metz, on the 18th. The sons of Dr. Simon, of Berlin, Dr. Stilling, of Cassel, and of several other medical men, have been wounded,—the son of Dr. Laner, Physician-in-Ordinary to the King of Prussia, severely."—(*Boston Med. and Surg. Journal*, Sept. 29, 1870, from *Brit. Med. Journal.*)

ADDITIONAL evidence of the baneful character of many of the articles sold as cosmetics has been developed by some chemical examinations made at the instance of the Metropolitan Board of Health of New York city. The hair-dyes were found to contain either lead in some form, or nitrate of silver: some of the "enamels" were largely composed of lead, and in one "wash" there was detected a quantity of corrosive sublimate. Even the most innocent of all, some white powders for concealing defects in the skin, composed mainly of white clay, would prevent the escape of secretion, and eventually render coarse and injure the surface they were expected to beautify.

THE late Dr. Auzias-Turenne, it is said, gave directions in his will that his body should be dissected, and his skeleton cleaned, articulated, and hung up in the museum of the medical school at Christiania.

MR. HERMANN W. NEWCOMB, a matriculant of the Jefferson Medical College, died in this city on the 2d inst., a victim of too intense devotion to medical studies and scientific investigations.

WE regret to say that a physician of this city is held under two indictments for causing death by producing abortion, and that another (not a member of the regular profession) is charged with the murder of an infant by throwing it into a stream of water.

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending		
	Oct. 22.	Oct. 29.	Nov. 5.
Diseases of the Brain and Nervous System	34	43	32
Diseases of the Organs of Circulation and Respiration	87	84	76
Diseases of the Abdominal Organs	22	12	23
Zymotic Diseases	12	16	20
Constitutional Diseases	16	5	6
Casualties	10	7	13
Stillborn	19	14	12
Unclassified	33	54	44
Unknown	2	0	4
Adults	132	122	129
Minors	103	113	101
Totals	235	235	230

LIST

OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE ARMY, TO NOVEMBER 4, 1870.

SIMONS, JAMES, SURGEON.—By S. O. 283, War Department, A. G. O., Oct. 24, 1870, assigned to duty at *Baltimore*, Md., as attending Surgeon and to examine recruits.

HAMMOND, J. F., SURGEON.—By S. O. 126, Headquarters Department of Texas, Oct. 5, 1870, relieved at Austin, Texas, and assigned to duty as Post and attending Surgeon at *San Antonio*, Texas.

ALDEN, C. H., SURGEON.—By S. O. 28, War Department, A. G. O., Oct. 19, 1870, to report in person to the Commanding General, Department of the Lakes, for assignment to duty.

BACHE, DALLAS, SURGEON.—By S. O. 126, Headquarters Department of Texas, Oct. 5, 1870, assigned to duty at *Fort McKavitt*, Texas, upon being relieved by Surgeon J. F. Hammond at San Antonio, Texas.

DAVIS, P. C., SURGEON.—By S. O. 187, Headquarters Department of Dakota, Oct. 19, 1870, assigned to duty at *Fort Benton*, Montana Territory, upon being relieved by Assistant Surgeon A. B. Campbell, at Fort Ellis, M. T.

BROOKE, JOHN, ASSISTANT SURGEON.—By S. O. 201, Headquarters Department of the East, Oct. 11, 1870, assigned to duty at *Raleigh*, N. C., as Post Surgeon, after proper disposition of medical and hospital property at Fort Delaware, Del.

BROOKE, JOHN, ASSISTANT SURGEON.—By S. O. 208, Headquarters Department of the East, Oct. 22, 1870, granted permission to *delay five days* in complying with par. 6, S. O. 201, C. S., from these headquarters, after completing disposition of medical and hospital property at Fort Delaware, Del.

SMART, CHARLES, ASSISTANT SURGEON.—By S. O. 208, Headquarters Department of the East, Oct. 22, 1870, to report to the commanding officer and to the Post Surgeon at *Fort Monroe*, Va., for duty.

GIRARD, A. C., ASSISTANT SURGEON.—By S. O. 126, Headquarters Department of Texas, Oct. 1, 1870, relieved at Fort McKavitt, Texas, and assigned to duty as Post Surgeon at *Fort Duncan*, Texas.

GUNN, G. H., ASSISTANT SURGEON.—By S. O. 133, Headquarters Department of Texas, Oct. 15, 1870, assigned to duty at *Fort Quitman*, Texas, upon completion of duty assigned him in par. 6, S. O. 114, C. S. from these Headquarters.

CAMPBELL, A. B., ASSISTANT SURGEON.—By par. 1, S. O. 187, Headquarters Department of Dakota, Oct. 19, 1870, assigned to duty at *Fort Ellis*, M. T., upon being relieved at Fort Benton, M. T., by A. A. Surgeon Marselis.

KING, W. H., ASSISTANT SURGEON.—By S. O. 59, Headquarters Cavalry Detachment Camp, near River Bend, Colorado Territory, Oct. 10, 1870, relieved from duty with this command, and to proceed to *Fort Wallace*, Kansas, in compliance with telegraphic instructions received from Headquarters Troops in the Field.

KING, W. H., ASSISTANT SURGEON.—By S. O. 201, par. 1, Headquarters Department of the Missouri, Oct. 26, 1870, assigned to duty as Post Surgeon at *Fort Wallace*, Kansas.

COWDREY, S. G., ASSISTANT-SURGEON.—By S. O. 200, par. 2, Headquarters Department of the Missouri, Oct. 25, 1870, to *accompany* the detachment of the Seventh Cavalry ordered from Fort Hayes to Fort Leavenworth, Kansas.

COWDREY, S. G., ASSISTANT SURGEON.—By S. O. 79, Headquarters Detachment Seventh Cavalry, Camp Sturges, Kansas, Oct. 24, 1870, to proceed without delay to *Fort Leavenworth*, Kansas. Upon arriving at Fort Leavenworth, he will report for duty to the commanding officer of that post.

COWDREY, S. G., ASSISTANT SURGEON.—By S. O. 202, Headquarters Department of the Missouri, Oct. 27, 1870, leave of absence for *thirty days* is granted.

ALDEN, C. H., SURGEON.—By S. O. 118, Headquarters Department of the Lakes, Oct. 27, 1870, will proceed to *Fort Mackinac*, Michigan, and report to the commanding officer of that post for duty.

LIPPINCOTT, HENRY, ASSISTANT SURGEON.—By S. O. 196, Headquarters Department of the Missouri, Fort Leavenworth. Oct. 17, 1870, will accompany a detachment of the Seventh Cavalry ordered from Fort Hays to *Fort Leavenworth* by par. 1, S. O. 192, C.S. from these headquarters.

DELANEY, ALFRED, ASSISTANT SURGEON.—By S. O. 190, Headquarters Department of the Missouri, October 10, 1870, is granted leave of absence for *thirty days* on surgeon's certificate.

WIRTZ, H. R., SURGEON.—By S. O. 25, Headquarters Department of Arizona, Oct. 13, 1870, will proceed to *Drum Barracks*, California, and await further orders from these headquarters.

ALDEN, C. H., SURGEON.—By S. O. 120, Headquarters Department of the Lakes, Oct. 31, 1870, will repair to *Fort Gratiot*, Michigan, and relieve Assistant Surgeon S. S. Jessop, U. S. A., from duty at that post. Assistant Surgeon S. S. Jessop, upon being relieved, will repair to *Fort Mackinac*, and relieve Acting Assistant Surgeon H. R. Mills, U.S.A.

TREATMENT OF POST-PARTUM AND SECONDARY HEMORRHAGE.—Dr. Hall Davis (*British Med. Journal*, May 7) reports three successful cases with the following treatment. After all other measures had failed, he cleared out the clots, and injected into the uterus a solution of the perchloride of iron,—one part to four of water. In one case, which had hemorrhage twelve days after delivery, the os uteri was dilated with sponge tents and Barnes' dilators before the injection was used. He has found the persulphate of iron of equal efficacy.

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THURSDAY, DECEMBER 1, 1870.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF LATENT PLEURISY, AND ON A CASE OF LATENT VALVULAR DISEASE OF THE HEART.

BY ALFRED STILLÉ, M.D.,

Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital, etc.

GENTLEMEN: The ideas which we form of certain diseases are so apt to be derived exclusively from characteristic instances of them that less striking and complete examples may escape recognition, unless we are in the habit of making a systematic examination of our patients. Diseases which in their ordinary form and average degree arrest the attention at once and fix it upon the suffering organ may, under other conditions, either of degree or association, be entirely latent and betray themselves by few of their usual and familiar symptoms. In other cases, again, a part essential to life may become profoundly altered in structure, so much so as to render death, and even sudden death, probable, and yet the patient may have no consciousness of his infirmity, and suffer nothing from it until some accident disturbs the nicely adjusted balance among his organs and rapidly extinguishes life. I propose to illustrate these general propositions by the study of two cases, the one of pulmonary and the other of cardiac disease.

CASE I. *Latent Pleurisy.*—J. H. is 29 years old, unmarried, and a laborer, of temperate habits. He was always healthy until about three months ago. At that time, in the month of December, he was working in a coal-oil factory, and was much exposed to cold and wet. He believes that he then caught cold; but he had no cough nor any pain in the chest. For about a month he still performed his daily labor, and would have continued to do so, had he not been discharged, along with many other men, for want of work. Not until several days afterwards did he observe that he had some shortness of breath on making any exertion, with a slight, dry cough, but no pain. This state of health remained unchanged until he entered the hospital, February 5, 1870, or about a week ago.

On examination, the labored action of the chest betokens some dyspnœa. The right side is evidently distended, and is nearly motionless during respiration; it is also everywhere dull on percussion, and the dulness extends beyond the left edge of the sternum. Over the left lung the percussion note is loud and clear. Auscultation of the right lung, behind, reveals rough breathing near the apex, bronchial breathing at the root, and the absence of breathing in the lower half of the lung. In front there is exaggerated respiration under the clavicle, and progressively fainter breathing-sounds below. Over the left lung, before and behind, the respiratory murmur is high-pitched, exaggerated, and slightly rough, and is distinct even to the base. The apex-beat of the heart is fully two inches below and to the outside of the left nipple. The liver-dulness extends at least two inches below the margin of the chest.

Since entering the hospital the patient's right side has been blistered, and he has taken iron and iodide of potassium.

This is the history of a disease occurring in a previously healthy man,—a disease apparently occasioned by cold, but attended with neither cough, pain in the chest, fever, nor such a loss of strength as prevented the patient from earning his daily bread by constant and rough labor. Indeed, it was not until he accidentally was compelled to give up work that he bethought himself of being sick, and then, for the first time, he noticed that he was somewhat oppressed in breathing. This state of the respiration has continued to be almost his only subjective symptom,—the only one, that is, of which he was himself conscious. On making a physical examination of his chest, we discover that the right pleural cavity is distended with liquid, an effusion which, occurring as this has done, must be regarded as denoting a *subacute* pleurisy,—not an *acute* pleurisy; for, although affecting a previously healthy man, it was not accompanied with the sharp, lancinating pain or stitch in the side, the chill, the fever, the cough, or the dyspnœa which denote the occurrence of acute inflammation of the pleura and, *mutatis mutandis*, of other serous membranes. In the latter form of pleurisy the symptoms which have just been enumerated prove a certain degree of vigor in the inflammatory process, a sudden and active arterial congestion, and the rapid exudation of a liquid containing a large proportion of solid matter, which usually coagulates rapidly, producing the so-called false membranes of serous inflammation. But there is another degree—or, I should rather say, kind—of pleurisy, as there is of inflammation of all other serous membranes, and of all tissues whatsoever, in which the process is essentially the same, but is also less energetic, and the symptoms are therefore proportionally slight. In the case before us we are furnished with an example of this form. The cause of pleurisy—dampness with cold—acted upon the patient, and in due time, but long afterwards, he is discovered to have a pleural cavity full of liquid. The cause and the ultimate effect characterize pleurisy, but the intermediate and proper phenomena of that disease, especially fever and pain, are wanting. This is called *subacute* pleurisy, from the nature of its symptoms; but it may also, from its long duration, be designated as *chronic*.

In this case, as in nearly all others of subacute pleurisy arising from external causes, the effusion of liquid was very copious, although it seems to have taken place slowly, for we find it stated in the notes that oppression and shortness of breath were not experienced until several weeks after the original exposure. In acute pleurisy, the primary cause of oppression and dyspnœa is not effusion of serum, but pain; pain restricts the movements of the chest, and may even suspend them altogether, at a time when the amount of effused liquid in the pleural cavity is quite inconsiderable. But in the subacute form, where pain is entirely absent, the dyspnœa is due to a purely mechanical cause,—to the accumulation of serum in the pleural cavity. This liquid compresses the lung, and distends the ribs in proportion as the compression of the lung advances, and thus, by excluding the air from the lung, prevents a due aeration of the blood, and occasions that peculiar and distressing symptom which we call shortness of breath,—a thirst for air, as it were, which the utmost efforts of the respiratory muscles may be unable to satisfy.

Our patient had shortness of breath, and that is the only symptom which he was aware of. He did not perceive what is so plain to him now, and to you at the same time. As you watch his chest during the act of respiration, you observe that the right side is almost motionless, that it is much larger than the left side, and, still further, that the intercostal spaces, which in natural respiration are depressed during the inspiratory act, as, indeed, you perceive that they are on our patient's left side,—that these spaces, I say, are distended and not depressed upon the right side of the chest; that, on the contrary, they form, with the ribs, a smooth and rounded surface, as if they were thrust outwards by a constant force acting from within the chest. Such a force may be exerted by the accumulation of any fluid, as blood, pus, serum, or air; but the history

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of the present case has already rendered it probable that the fluid here is mainly serous. The results of percussion lead to the same conclusion. In the lower half of the right side of the chest, percussion is absolutely flat; in the upper half it is more or less dull; and nowhere is it resonant. Not only so: we find that the dull percussion of the right side is not restricted within the normal limits of the right pleural cavity, but that it extends beyond the median line of the sternum, beyond even the left edge of that bone, while over the left lung the percussion sound is loud, clear, and high-pitched. On ausculting the right lung behind, prolonged expiration is found at the apex and at the lower angle of the scapula, while below this level all respiratory sounds cease; the breathing-sounds in the left lung are everywhere loud, prolonged, and shrill.

What do these physical signs teach as to the condition of the organs within the chest? Evidently this: that the cause which dilates the right side of the thorax is the same cause which compresses the right lung; that it operates equably over nearly the whole of the same side; and that it must therefore be a fluid,—a liquid or a gas. That it is not the latter, is proved by the percussion sound, which is flat or dull, and not tympanitic, as it would be were air the distending agent; and that it is the former, is also directly demonstrated by the upper limit of the percussion dulness changing with the position of the patient. We learn further, in regard to the physical signs, viz., from the absence of all respiratory murmur at the base of the lung, where the flatness on percussion is complete, and from the presence of a modified respiratory murmur, bronchial in its quality, at the upper portion of the lung, where the percussion dulness is less absolute, and, further, from the fact that the limits of the percussion dulness vary with changes in the patient's posture, and that, in any position, whatever portion of the right lung is uppermost yields not only more or less resonance on percussion, but also more or less respiratory murmur, bronchial or broncho-vesicular, according to what part of the lung is uppermost for the time being,—we learn, I say, from these physical facts, that the right lung is compressed, and the ribs of the same side are distended, by a liquid effusion into the pleural cavity, which effusion, however, does not compress the entire lung to an equal degree, but, in the erect position of the patient, cuts off all sound from the lower half of the chest on the right side, but allows more or less respiratory murmur to be heard from the upper third of the lung,—from which facts it may further be inferred, I think, that the lung is nowhere adherent to the walls of the chest, but is floated upwards upon or towards the surface of a serous fluid contained in the cavity of the pleura.

This explanation appears to afford a sufficient reason for most of the phenomena of the case we are studying. But there is still another which should be alluded to: I refer to the position of the heart. You have seen that it is thrust far to the left, so that its apex-beat can be felt, as well as seen, two inches below the left nipple and about an inch beyond the line of that projection; in other words, the heart is thrust at least an inch to the left of its normal position, while the patient is sitting or standing. If it occupied this place while the patient lay upon his left side, there would be nothing very extraordinary in the fact, because you should bear in mind that, except the digestive canal, the heart is the most movable organ in the whole body, and changes its position with every alteration in the inclination or decubitus of the trunk. But, as I remarked, its displacement is in this case permanent, and is therefore, in the absence of any disease in the left cavity of the chest, probably occasioned by the effusion which distends the right pleural cavity. We have seen that the effusion does not altogether fill that cavity, for we find lung resonance and respiration at its upper part, and we may therefore fairly conclude, from this fact and from the displacement of the heart taken together, that the effusion is serous and not fibrinous; for had it been of the latter sort it must almost certainly have compressed the entire lung, and rendered respiration everywhere inaudible on the right side, before it invaded the left side of the chest and thrust the heart so far away from its normal position. Another fact mentioned in the notes bears an almost identical interpretation. The liver, it is stated, extends considerably below the false ribs. In the absence of any reason for supposing that the liver is itself increased in size, we may conclude that it is thrust downwards by the same force within the right pleura which we have shown must have displaced the heart; that is to say, the pleural effusion. Consequently, we find that this effusion, although it possesses a force sufficient not only to dislocate the heart, but also to depress the liver, is, nevertheless, unable entirely to overcome the expansive power of the lung and to compress it and deprive it of air. The exertion of this force by the lung proves that organ to be free in its movements; for if the effusion were not, as we have supposed it to be, entirely liquid, the lung would be more or less hampered, and unable to exert the distending and compressing forces which we have seen that it exhibits.

Having thus endeavored to arrive at a just apprehension of the condition of the patient's chest, we have still to determine the questions, What are the prospects of his recovery? and what method of treatment should be employed? This case illustrates the value of an accurate diagnosis in reference to prognosis and treatment; for it is evident that if the investigation we have made had led to the conviction that the lung was bound down by false membranes and the cavity of the pleura was distended with pus, our conclusion in regard to both of these points must have been very different from what it will be now, when the sole indication is to remove the serous fluid which fills the right pleura. There is more than one method of accomplishing this object. One is very prompt and summary; for it consists in drawing off the water by means of a trochar and canula. But this method is not free from objections; for the patient naturally shrinks, as we all do, from a surgical operation; then the puncture, as a wound merely, is not absolutely innocuous, for it may occasion erysipelas; moreover, the pleura, after being emptied, may inflame by the contact of the air, and a purulent secretion, with serious effects, may follow. These objections are not without a force, which is increased in proportion as the operation is not necessary. Now, it cannot be said to be necessary, especially since the patient is suffering very slightly from dyspnœa, and as other means are available which sometimes perfectly succeed in removing serous effusions. I should, perhaps, modify the statement, and say, "measures which sometimes *appear* to succeed" in removing chronic pleural effusions. I would impress upon you that if a proper regimen is associated with the treatment referred to, the degree of efficacy exerted by each agency may be very difficult to estimate. It is very certain that if I were forced to choose in this case between an appropriate regimen and any given course of medicinal treatment, I should unhesitatingly prefer the former. In the present instance we are not trammelled by any such alternative, but may employ both methods at once. I shall therefore direct this patient to have as good diet as the house affords, and to take as much exercise as he can without fatigue, seeking in this manner to promote the absorption of the effusion. I do not for a moment doubt that it will at least be promoted by these agencies.

The medicinal agents which may be expected to con-

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cur with regimen in effecting a cure are both internal and external. Of the latter, the most efficient are blisters. I entertain no doubt, if the fluid in our patient's chest is serous, that large blisters allowed to vesicate fully, but not to produce suppuration, will gradually remove the liquid, or the greater part of it. Their efficiency, certainly, will depend very much upon the quality of the liquid in the pleura; the more watery it is, the more quickly—the more purulent it is, the more slowly—will it subside under this treatment. Whether the blister will act by merely withdrawing so much serum from the blood, which is replaced by an equal or proportionate quantity absorbed from the pleura, or whether it will stimulate the nerves of the skin, and, by a reflex influence, those of the pleura also, so as to quicken the absorbing functions of that membrane, or, finally, whether it will act through the absorption of its cantharidin into the blood, and the stimulation of the capillary functions as a consequence, is more than I can tell you. Nor do I regard the answers to these questions as of primary importance. It is of the utmost interest to us as scientific physicians to know the precise mode in which a medicine operates in curing a disease; but it is of infinitely greater consequence to learn whether it really cures the disease at all. Not a few eminent writers and teachers flatly deny that blisters are capable of removing serous collections in either of the ways that I have suggested, or in any other. The observation of the whole medical world from the beginning until now, and my own observation, have taught me a different lesson; and before I give up my faith in the efficacy of these remedies I must have some better ground of doubt than my inability to explain it. If I must wait until a reason admitting of no doubt or cavil can be given for the operation of medicines in the cure of disease, I would abandon the practice of my profession altogether, rather than be compelled to witness sufferings which I cannot mitigate, and deaths which I am powerless to prevent.

Of internal remedies, several suggest themselves. Purgatives and diuretics would seem to be indicated; for the abstraction of fluid by the bowels and the kidneys, one would imagine, must occasion the absorption of pleural effusions. But here, as so often happens, fact and theory disagree. These evacuants may diminish an anasarca or an ascites, but they have no influence upon a pleuritic effusion. It used to be the practice, in cases like the present, to administer mercury in small doses until the constitutional operation of the drug was exhibited by a slight tenderness and redness of the gums. It is very probable that this treatment might prove curative in the present instance; but at what an expense! At the cost, perhaps, of radically and permanently impairing the health of this man, who, except the local infirmity we have been studying, enjoys pretty good health. I think, therefore, that we are not warranted in resorting to this remedy. There is only one other medicine which it is necessary to consider. Iodine is reputed to exercise an absolute and peculiar control over the function of absorption,—of the substance of certain glands especially,—and a less, though a very efficient one, over effusions and exudations. Upon the ground of this general belief, which it seems to me is very far from being substantially supported by facts, I have prescribed iodide of potassium for our patient, in the dose of five grains three times a day, with the intention of increasing the quantity gradually hereafter. At the same time, and in order to counteract the tendency to anæmia which this case exhibits, as nearly all similar ones do, I have recommended that iron be used, in the form of the solution of iodide of iron, as the most appropriate preparation of the metal to be given along with the iodide of potassium.

(To be continued.)

ORIGINAL COMMUNICATIONS.

AMPUTATION AT THE HIP-JOINT

FOR MALIGNANT DISEASE OF THE THIGH.

BY F. F. MAURY, M.D.,

Surgeon to the Philadelphia Hospital, and Lecturer on Venereal and Cutaneous Diseases in the Jefferson Medical College of Philadelphia.

WILLIAM WALLACE, a laborer, aged 23 years, was admitted into the surgical wards of the Philadelphia Hospital, April 22, 1869, under the following circumstances. He says that about twelve months ago he received a severe kick upon the anterior and inner aspect of the right thigh at its middle third, which was followed by severe and continued pain. After two weeks, swelling commenced in the limb, and simultaneously there appeared a small, hard, subcutaneous nodule, which was movable and painful. This nodule enlarged slowly at first, but at the date of his admission into the hospital its rapid growth was especially noticeable. It was also the seat of constant pain of a dull, aching, and gnawing character, more intense at night, and depriving him of rest and comfort.

The tumor occupied the anterior aspect of the right thigh. Its greatest circumference, which was at the junction of the middle and upper third of the thigh, measured twenty-seven inches. The left thigh measured, at the same point, seventeen inches. The perpendicular measurement was eleven inches. It was oblong in shape, hard, inelastic, smooth, and immovable. There was elevation of the temperature of the part, with some degree of discoloration, and marked enlargement of the subcutaneous veins. The lymphatic glands of the groin were implicated only to a slight degree. The femoral vessels were stretched over the mass. The growth had weakened and somewhat emaciated the patient; his appetite was impaired, and his sleep sadly interfered with.

On the 6th of May a delicate trochar was plunged into the central part of the growth, to the depth of two inches. A sanguinolent fluid, mixed with some small granular masses of a cheesy consistence, followed the withdrawal of the instrument.

Dr. W. Pepper and Dr. Tyson made microscopical examinations of these constituents. Dr. Pepper stated that the granular masses consisted of numerous cells in an extreme state of fatty degeneration, a large amount of free oil, and some fragments of capillary vessels with fatty walls filled with disintegrating clot. Subsequently Duchenne's flesh-hook was introduced into the upper part of the tumor, to the depth of an inch, and a small piece of firm tissue removed, which was composed partly of the capsule and partly of the proper substance of the mass.

In the sections of this submitted to Dr. Tyson for examination, it was found that a fibrous intercellular substance was not appreciable, the elements being purely cellular, and consisting,

1. Of sharp, well-defined round and oval nuclei, averaging the $\frac{1}{2500}$ of an inch in diameter, which were darkly shaded, but, as a rule, only moderately granular. They often existed in closely-packed masses. They were rarely nucleolated.

2. Cells,—all, more or less, modifications of the spindle-cell, of which certain typical forms were also present. Most forms, however, were modified, including simple oval cells abruptly terminated on either side, and occasionally angular.

They contained a well-defined nucleus, presenting all the characters assigned to the free nuclei, and, in their darker shading, more distinct than the body of the cell.

The nuclei, with very few exceptions, were single; an occasional spindle-cell was present with two nuclei, but these were rare.

Equally rare were large oval cells, averaging $\frac{1}{2000} \times \frac{1}{300}$ of an inch, and containing as many as three nuclei. The cell-contents were now and then granular, but more frequently faintly nebulous. As in the free nuclei, these cells were rarely nucleolated.

3. A small but appreciable number of granule cells, corresponding more frequently in size and form with the large oval cells.

As to the classification of this tumor, with regard to the intercellular substance, this is clearly in minimum, being, in the sections examined, barely, if at all, appreciable. The form of the cell-element—a modified connective tissue cell—

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places it in the connective tissue series. In quantity, the cellular element decidedly predominates.

Virchow applied the term sarcoma to such a formation, of which the tissue belongs to the common group of the connective tissues, and which is accurately distinguished from the different species of the connective tissue group by the predominant development of the cell-element. These are not commonly considered malignant tumors; yet Virchow and Paget tell us that they have a certain tendency to recurrence, many being operated upon four or five times in the same place, and that, although they generally have an innocent period, later they may become malignant.

Anatomically, then, perhaps this tumor may be considered innocent; physiologically, malignant.

On May 6, under the influence of an opiate, the patient passed a quiet night; the tongue was moist and slightly coated; the pulse 96, full and regular.

May 7. He suffered much pain during the night; slept but little. Tongue dry and furred; skin hot; pulse 108, and quick.

On the 8th of May, a hypodermic injection of one-quarter of a grain of sulphate of morphia having been previously administered, the patient was placed on the operating-table of the amphitheatre of the hospital. Pure chloroform was administered. There were present, in addition to the medical class, Professor Gross and Drs. W. L. Atlee, Brinton, W. H. Pancoast, S. W. Gross, Morton, Ludlow, Rhoads, Pepper, Packard, Thompson, Keen, and Mears. All these gentlemen expressed a conviction as to the malignancy of the growth and the eminent propriety of the contemplated operation.

The antero-posterior method by transfixion was the procedure selected, the circulation being so completely controlled by the abdominal tourniquet that not more than three ounces of blood were lost. Seventeen ligatures were applied to the divided vessels, including the femoral vein. Reaction came on soon after the completion of the operation, and the stump was dressed four hours subsequently.

In conformity with the practice of Professor Gross, the flaps were brought into close approximation, by means of four long steel needles inserted at equidistant points through their substance, and the union was further strengthened by carrying a silken thread from needle to needle, after the manner of the hare-lip suture. The intervals between the needles were brought in contact with the ordinary interrupted suture and long, narrow adhesive strips. A compress secured by a roller, placed upon the posterior surface of the thigh, completed the dressing.

For the first twenty-four hours there was some nausea, but, under the use of ice held in the mouth, and morphia, he passed a comparatively comfortable time. On the third day the dressings were removed, when the stump presented an excellent appearance, there being merely slight serous oozing. On the 17th of May, at least three-quarters of the wound was found to have united by the first intention. On the 21st, the pins at the inner and outer angles of the wound were removed, the other two not being interfered with for two weeks longer. On the 25th, seven minor ligatures came away; while the femoral thread was removed on June 29, the remainder having dropped off in the interval.

Up to this time the general condition of the patient had been most excellent; his appetite and sleep had been good; he had been sustained by champagne and the most nutritious and concentrated food; there had never at any time been much purulent discharge from the stump; but he suddenly, without any assignable cause, began to fail rapidly, and expired on the 30th of June.

Post-mortem examination revealed the following facts: Body very much emaciated. The stump had apparently entirely healed. On laying it open, however, along the line of incision an appearance very much resembling that of the structure of the pancreas was observed. The vessels were all well sealed. Opposite the acetabulum there was a small cavity containing half an ounce of pus. Indications of general peritoneal inflammation were present. Adhesions of the parietal and visceral layers existed. About eight ounces of thin, offensive pus were found in the abdominal cavity. The spleen was of natural size, friable and granular. The kidneys were normal.

There had been an extension of the disease, which had returned in the stump, up into the abdominal walls along Poupart's ligament. There was an abscess between the abdominal walls, near the anterior superior spinous process of the ileum, containing eight ounces of pus.

There also existed a psoas abscess, which contained half a pint of pus. The lungs were natural. About two ounces of bloody fluid were found in the pleural cavity.

The heart was small, weighing nine ounces; its texture was normal.

A microscopical examination of the recurrent tumor was made. It presented very little stroma, but was composed entirely of cells, most of them round or slightly oval, with single nuclei and granular contents, and a few spindle-shaped.

The tumor which occupied the pelvis was chiefly composed of diseased glands. The cut section yielded abundant cancer-juice on being scraped. The elements present in the mass bore strong resemblance to those in the original tumor, the differences probably depending on the greater rapidity and luxuriance of growth.

Remarks.—The points of practical interest possessed by this case are these: 1. The true nature of the affection, when considered in its relation to operative interference; 2. The mode of dressing and firmly closing amputation-flaps.

The microscopical examinations plainly place this tumor in the group denominated "spindle-celled sarcoma" by Virchow, the unwavering tendency of which is to recurrence after removal, at or near the site of operation. The teaching of surgical experience tells us that, in the removal of limbs for suspected or well-defined malignant disease, it is better to disarticulate at some distance, if possible, from the morbid growth than to interfere with the continuity of a bone, as by this means the greatest immunity from relapse is afforded. In the present instance, the rapidity of repullulation was greatly increased by the fact that it was observed that all the cut ends of vessels, especially the veins, opening into the flaps at the time of operation were filled with a white, soft substance, similar to, and identical in all respects with, the composition of the morbid mass, the coats of the vessels themselves also being evidently implicated.

The mode of retaining the flaps in close approximation by means of long steel pins was first practised in this city by Professor Gross, in his second case of amputation at the hip-joint, performed at the clinic of the Jefferson Medical College, October 14, 1865, which case is embodied in the valuable paper of Dr. Thomas G. Morton, of this city, "On Amputation at the Hip-Joint, with the Histories of the Cases in which the Operation has been performed in Philadelphia," published in the *American Journal of the Medical Sciences* for July, 1866, p. 31. As chief of the clinic at that time, I had the honor of observing the satisfactory result of this procedure. The present case likewise bears testimony to the same effect. Complete coaptation of the flaps can thus be readily secured, which is important in preventing an undue accumulation of pus and irritating fluids within.

In conclusion, I must express my indebtedness to Drs. Hough, Elmer, Porter, and Mosely, house surgeons, for their valuable services rendered in the after-treatment of the case.

CHEMICAL ACTION OF MUCOUS MEMBRANES.—Dr. Paschutin, of St. Petersburg (*London Lancet*, Oct. 1, p. 480), proves by experiment that an aqueous infusion of the mucous membrane of the small intestine of the dog is capable of converting starch into sugar; a power which is also possessed by the mucous membrane of the trachea and the urinary bladder, and to a less extent by that of the gall-bladder, cæcum, large intestine, stomach, and rectum. None of them can, however, like the infusion of the mucous membrane of the small intestine, convert cane- into grape-sugar. This last power is found to be possessed by the dog, pig, rat, mouse, and rabbit, but not by the sheep and cow.

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CASE OF ALLEGED MALPRACTICE.

BY JOHN J. REESE, M.D.,
Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania.

CASES in law in which an action has been brought for alleged malpractice have, within the past few years, become increasingly frequent, both in Philadelphia and New York.* Unprincipled patients, who have been wisely and skilfully treated by experienced surgeons for diseases the cure of which must necessarily entail some deformity—such as certain fractures and luxations, caries of the spine, etc.—not unfrequently exhibit their appreciation of the attention and skill of their surgeon by dragging him into court in a suit for heavy damages for alleged malpractice in their case. That this is a most flagrant wrong to the practitioner, as well as the grossest outrage against justice and humanity, none will deny. But the glaring violation of right may not be always vindicated in the courts of justice, and a stupid and prejudiced jury *may not* always render a verdict in accordance with truth and equity. Hence it becomes a matter of the utmost importance to the profession to protect itself against all such flagitious attacks.

In nearly every such case, we may be certain that the plaintiff is prompted by the base desire of pecuniary gain, hoping to realize a handsome profit by his infamous scheme; and in too many instances, it is to be feared, he is aided, if not instigated, by some wretched hanger-on of the law, or, it may be, even by some so-called doctor, who has been promised beforehand a goodly share in the expected plunder.

A case of this nature (Haire *vs.* Reese) which lately occurred in this city, and in which the writer was the defendant, has excited a good deal of interest in both the medical and legal professions, inasmuch as it involved certain questions of importance, both in a professional and scientific point of view. The very able charge of Judge Thayer† exhibited all the main points with sufficient clearness; but it may not be amiss to give a synopsis of the case, in order that it may prove of service to some brother hereafter who may be so unfortunate as to meet with an equally unscrupulous and vicious customer.

On the second day of February, 1869, I was hastily summoned to the Colored House of Refuge, to attend a man who had, while painting the house, fallen from the second-story window upon the stone pavement beneath, about twenty-five feet distant. His fall had been somewhat broken by his lighting first upon the railings and then being thrown off upon the ground. I found him bleeding profusely from a lacerated wound of the scalp, and groaning piteously from pain about the right hip, on which the force of the blow appeared to have been spent. My first duty was to arrest the hemorrhage from the head. On examination, I found no fracture of the skull; and consciousness was perfect. On next proceeding to examine the condition of his hip and leg, so great was the agony expressed on the slightest movement of the limb, that I desisted from further attempts, until I could have him removed to his own home, where I might etherize him, and so institute a careful and thorough examination. I accordingly had him placed in a covered spring-wagon, upon a bed, and thus conveyed to his residence, some three miles distant. I preceded him to his house, in order to be prepared for his arrival, where I had a bed made ready for him in a lower room. After a complete anæsthesia, I was able to make a thorough exploration of his limb. To my surprise, I found neither fracture nor dislocation, although I examined him most carefully. On drawing the limb down, there was neither shortening nor lengthening discovered; neither inversion nor eversion of the foot; and on rotating the thigh, with one hand on the hip-joint, there was not the slightest crepitation. In fact, there was an entire absence of all the symptoms of either fracture or luxation about the hip. The shaft of the femur was likewise uninjured. The case was simply one of excessive contusion about the great trochanter, in which the muscles and nerves suffered primarily, but which, as will be seen, subsequently resulted in some shortening of the limb. I had the patient carefully placed in bed, upon his back, and kept at perfect rest. Anodyne lotions (lead-water and laudanum) were at first kept constantly applied to the hip, which continued extremely painful; and subsequently slightly stimulating and anodyne applications were made. Under this treatment, the man began slowly to improve; his pain diminished, though the swelling about the hip did not entirely disappear.

Three weeks after the accident, feeling anxious lest possibly I might have made an error in my diagnosis, and lest there might be, after all, a fracture of the neck of the femur, I asked my friend Dr. D. Hayes Agnew, Surgeon of the Pennsylvania Hospital, to see the patient with me, which he kindly consented to do. Together, we again instituted a most critical and searching examination, by all the methods known in surgery. The man was laid upon his back, and his legs carefully measured, both by comparing them with one another, and also by the tape-line. Then, rotation of the thigh was practised, one hand being held over the joint, in order to discover any crepitation, as well as to notice the arc described in the movement of the trochanter. Next, he was made to stand upon the sound limb, and to swing the affected one to and fro. From all these various means employed, Dr. Agnew arrived at the conclusion that there was certainly no sign of either fracture or dislocation, thus confirming my own original diagnosis, that it was simply a case of contusion of the hip. I continued to visit him until May 10, a period of just fourteen weeks, seeing him every day during the first week, and subsequently less frequently,—making him, in all, twenty-one visits. About a week before I ceased my attendance, I permitted him to walk about on crutches, which he was able to do with considerable facility, although he could not put his foot to the ground without still feeling pain in the hip-joint.

I heard nothing more of this man until the month of August following, when I was rather astonished at receiving a note from an attorney, apprising me that my quondam patient, who I was fondly imagining was cherishing grateful recollections of my kind attentions (for he has never paid me a farthing for my services), had commenced a suit against me for damages, for causing him to have a shortened limb; alleging that this had resulted in consequence of my want of skill and attention to him! I soon satisfied this legal gentleman that there were no grounds for an action, when he at once abandoned the case. About a week afterwards, I received another similar missive from a *second* attorney. This gentleman likewise threw up the case, as soon as I convinced him of the absurdity of the allegation. But, what was most extraordinary, my friend Dr. Agnew, who only saw the patient once in consultation, and who did nothing but—what my learned counsel

* The case of Walsh *v.* Sayre, lately decided in New York, is of equal atrocity with the present one. Dr. Lewis A. Sayre, an eminent surgeon of that city, was sued by the father of a child for an alleged malpractice in having caused lameness of one leg by opening the hip-joint by mistake, when making an incision into an abscess near the joint. A tedious and vexatious trial ensued, in which the doctor was triumphantly vindicated from the malicious and unfounded charge. Not only was a verdict rendered in his favor, but an allowance of five per cent. of the amount of damages claimed by the plaintiff ($20,000), together with an extra allowance for costs and disbursements,—making, in all, the sum of thirteen hundred and fifty-nine dollars and seventy cents ($1359.70),—was adjudged to the defendant.

† We expect to print this charge at length in our next number.—Ed.

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tersely observed in his cross-examination of the plaintiff —"measure his legs," was also sued at the same time, by our aggrieved patient! We heard nothing further from our friend for about six months, when we received a notice through a *third* attorney that our cases would now certainly be pushed to a trial. In the mean time, however, still another member of the legal profession—the *fourth*—had been consulted, who, on hearing the circumstances of the case, wisely declined having anything to do with it.

Dr. Agnew's case was the first called up, in May last; but it was postponed. My own case, after having been also postponed at the plaintiff's request, was tried on the 17th and 18th of October last. I had never seen the man Haire since May, 1869, a period of more than seventeen months. He undoubtedly had, when I saw him in the court-room, some shortening of his limb; and the testimony of several surgeons who had examined him about a year after his accident, was that shortening did exist at the time of their examination. But there was not one of the medical witnesses for the prosecution, who would, or could, say *that this shortening was the result of a previous fracture of the neck of the thigh-bone;* they all unhesitatingly admitted that the shortening might be very properly accounted for *by an interstitial absorption of the neck of the bone*, occurring as the result of the contusion of the hip.

This was the ground which I took in my defence. I denied that there had ever been a fracture; in which opinion I felt fortified, both by my own original examination of the joint, and still more by the subsequent very careful and exhaustive examination of Dr. Agnew. I contended that the shortening of the limb was the result of the interstitial absorption of the neck of the thigh-bone, caused by the violent contusion of the trochanter, inasmuch as it did not show itself *for several months after the injury*. I was fortunately enabled to sustain my position, not only by appealing to the experience of my own medical witnesses,—the most distinguished surgeons and professors of our city,—but also by numerous morbid specimens, which completely illustrated my case, and which were so clearly exhibited by the defence, as to be perfectly intelligible even to the jury. I was also, happily, enabled to appeal to some very striking cases of a similar injury (contusion), recorded by Mr. Gulliver in vol. xlvi. of the *Edinburgh Med. Jour.*, 1836, and also to the valuable lecture of Mr. Paget, in *Brit. Med. Jour.*, Feb. 19, 1870, both of which may be consulted with advantage as throwing much light on this often obscure point,—"the cause of shortening of the leg as the result of direct injury to the hip."

The able charge of the judge reviews the whole ground. The well-established point of law, that an action for malpractice can be sustained only by proving a want of ordinary skill and of attention on the part of the defendant, is prominently reaffirmed; and the proofs of the contrary in the present case, are clearly set forth. The scientific portion of the defence is also sufficiently elucidated and dwelt upon. After a clear expression of his own convictions from the testimony given, the judge sent the case to the jury, who, without leaving their box, returned a verdict for the defendant; the costs to be paid by the plaintiff.

I feel under the deepest obligations to all my professional brethren, who have so kindly sympathized with and sustained me in this vexatious case. To my friends Professors Gross and Agnew, and Drs. Brinton, Levis, and Packard,—all eminent surgeons, connected with our largest hospitals,—and likewise to Drs. Duffie, Hurst and Schrottz, who, though called by the plaintiff, really rendered me most valuable aid in the cross-examination by their candid and lucid statements, I owe especial thanks.

I will only state, in conclusion, that I regarded it as a matter of principle, and as a duty which I owed to the profession, fearlessly to meet this lawsuit, which I might easily have avoided by listening to the base proposals of the plaintiff's counsel to pay black-mail. I felt that the honor of our common profession was on trial; and I cannot but congratulate my brethren, as well as myself, that the victory was won.

THE APPLICATION OF LOCALIZED MOVEMENTS

TO THE TREATMENT OF CERTAIN FUNCTIONAL NERVOUS DISORDERS.

BY WM. R. FISHER, M.D.,

of New York.

IN the *New York Medical Record* for August 15, 1870, there appeared an article, by Dr. Chas. F. Taylor, on the therapeutic value of the "Localized Movements." The author therein explained that this mode of treatment is capable of responding to distinct indications by two methods of application: the one, psychological in its action, general in its effect, acting as a remedial agent through the cerebro-spinal and sympathetic nervous systems; the other, more purely mechanical in its nature, productive of results by its local influence in the establishment of physiological processes through the muscular and vascular systems, and thereby promoting nutritive changes in the special regions submitted to its action. While the latter would, at first sight, seem to give promise of a wider range of usefulness in the treatment of deformities, stiffness of the joints, certain forms of paralysis, constipation, dyspepsia, and kindred affections, still the writer devoted the bulk of his paper to the exposition of his views upon the greater utility of its employment in combating many forms of functional nervous derangement which present themselves to the practitioner, especially among female patients. He believes that the manifestations of disorder in the nervous system, which are so prominently developed in many varieties of uterine affection, "spinal irritation," hysteria, and so-called nervousness, are very often due to a subordination of the muscular and organic functions to the nervous, and that as health is dependent upon the maintenance of an equilibrium between these, so a derangement which brings about an exaltation of the one at the expense of the other demands the repression of that which may be exerted in excess, and the development of that which is in abeyance. Hence he concludes that the proper treatment for conditions of the system characterized by excessive nervous irritability, with corresponding depression of the muscular powers, must be found in means which tend to elevate the latter to the position in the economy which they maintain in health, and this, he believes, can be more surely and easily effected by the "movement cure" than by any other method which has hitherto been employed.

The limits of the paper to which reference is now made necessarily precluded any attempt at illustration by cases of the principles which the writer endeavored to elucidate, and my purpose, with this brief summary of its main points by way of introduction, is to give some examples of the practical working of the system. But an attempt to point out all the varied conditions of the body in which this treatment may be advantageously employed, with the indications for its use and the methods of its application, would require far more space than can at present be commanded; and I shall therefore confine this article to the consideration of a group of functional nervous affections, which are of common occurrence in practice, under various names, and which was first de-

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scribed by Dr. Taylor in the *Journal of Psychological Medicine* for April, 1868, under the title of "Carnomania." The symptoms which are presented in this class of disorders do not arise from any peculiarity in the mental constitution or condition of the patient, as has sometimes been taught and is very generally believed, but depend entirely upon local or general derangement in the body: "It is the body which sends false or perverted impressions to the mind, and not the mind which imagines falsely concerning the body." And the distinguishing feature in each variety is a modification of perception and volition (using these terms in their widest signification, to indicate the faculties of receiving and responding to impressions), by which these functions are perverted, impaired, or exaggerated. "Carnomania" was proposed as a term under which the various pathological conditions presenting these characteristics might be collected.

The following case, being pure and uncomplicated, will begin the series which are to be quoted:

Case I.—A strong, hearty gentleman, whose temperament was decidedly opposed to the "nervous," had suffered from necrosis of the head of the tibia, which in recovering had left a semi-flexed knee, and, as a consequence, an almost useless limb. Distinguished surgeons had declared this position to be due to anchylosis, and incurable; but an examination failed to sustain their opinion. The hamstring muscles were found to be strongly contracted, and there was a partial dislocation backwards of the bones of the leg from muscular spasm, which had existed during the progress of the inflammatory disease, but there was no evidence that extension could not readily be effected. An appliance was therefore employed to overcome the resistance of the contracted muscles, and the leg was soon straightened. It was found, however, that the ability to use the limb was no greater after this had been accomplished than before. The muscles were somewhat atrophied from disuse, but there was no lesion of sufficient magnitude to produce the total absence of motor power which the case presented, and there was no alternative to the supposition that the inability to walk was merely an evidence of a loss of consciousness of power in the limb. This opinion was therefore communicated to the patient, and treatment was at once employed to restore the impaired perception by means of certain movements, which will be described elsewhere, with the object of directing volition to the useless muscles. A steady persistence in this direction, in course of time, restored to the limb its normal powers; and the gentleman has for several months been conducting with ease an active business in Chicago, which requires him to pass much of his time on his feet.

In our orthopedic practice such cases are frequently met with, in which a limb that has been rendered powerless for a time by disease fails to impress the consciousness with the sense of returning power after the removal of the paralyzing cause, and persistent lameness results. The mind does not take cognizance of a restitution of power, and hence volition is not directed to the execution of muscular action. Many of our patients who present this peculiarity are little children, in whom its existence cannot be ascribed to any influence of the imagination; and the uniform success which attends the method of treatment we have indicated, supports emphatically the correctness of the view upon which it is based.

The following case is a remarkable illustration of perverted perception and volition, giving rise to a localized increase of muscular power in a condition of spasm:

Case II.—In January, 1868, a young lady of superior intellectual development, an authoress of considerable reputation, while walking with a gentleman, slipped and fell towards the ground, with her left arm extended. She was unable to tell whether her hand touched the ground or not; but, as she did not lose her hold upon the arm of her companion, it is certain that no direct injury could have been inflicted by the fall, nor did any symptoms arise at the time to alarm her. On the following day, however, her left arm was numb and powerless, and for six weeks it remained in the same condition. About this time it improved somewhat, and, though at intervals it was subject to attacks of diminished motility without apparent cause, it advanced considerably towards a state of normal power during the next three months. In July a sister was attacked with typhoid fever, and, in consequence of the anxiety, loss of sleep, and confinement to the sick-room while nursing her, Miss A. became completely exhausted. As she approached this state of prostration, her left shoulder-joint began to become stiff and painful, and as the condition advanced it assumed a perfect rigidity. After trying a variety of treatment without any benefit, she applied to Dr. Taylor, in October, 1868, for advice. Her arm was confined to her side by muscular spasm, and the shoulder was considerably elevated by contraction of the trapezius; the deltoid was somewhat atrophied, and the limb presented many of the features of a subluxation. A careful examination, however, showed conclusively that such was not the case. She was placed under the influence of nitrous oxide gas, and the limb was moved freely in every direction, and this operation was repeated four times, at intervals of a few days, in the hope that by stretching the fibres of the contracted muscles their tonicity might be so far overcome as to prevent the recurrence of spasm. But this procedure, which in similar cases had resulted favorably, seemed in this instance to aggravate the difficulty. She was then subjected to passive movements of the limb, but with the same unfavorable effect; and both were soon abandoned for an opposite course of treatment. As the patient was a woman of more than ordinary intelligence, Dr. Taylor explained to her at some length the reasons for his opinion that the tonic spasm which had existed for so long a time in the muscles inserted into her left arm, was not in any way dependent upon a lesion, as she had been led to believe, but was simply the result of perverted perception and volition. She was amazed at the novelty of this statement, but readily acquiesced in its plausibility, and a plan of treatment was instituted with the view of correcting this abnormity by means of the unaffected arm. Several times each day her arms were slowly and gently raised together, and she was told to disregard the left one entirely, but to pay particular attention to the right, and to restrain it whenever it was observed to rise in advance of the former; her mind being kept in a state of close attention by the doctor's constant admonitions. The results of this treatment in a few days sustained in a most satisfactory manner the correctness of the opinion which had been expressed, for she was entirely relieved. During the past spring, however, she has again been subjected to a prolonged mental and physical strain by the illness and death of her father, and decided symptoms of an impending return of the former rigidity and pain have shown themselves in the left shoulder. But on this occasion she comprehended the nature of the difficulty, and mental diversion, with horseback exercise, has again removed it.

This patient presented none of the evidences of hysteria, as it is usually described and spoken of, and it is difficult to account for the phenomena in her case, except by attributing to a perverted perception and volition a large share in their evolution and continuance. The repeated extensions of the muscles under an anæsthetic were useless, because by them the necessary modification of the abnormal functions was not attained, and they were positively injurious, because through their employment the attention of the mind was more firmly fixed upon the part affected; and the same is true of the passive exercises which were used. But by the course of treatment which ultimately proved successful, the attention was withdrawn from the rigid muscles to those of the healthy arm, and complete relaxation followed. It is not necessary that in similar cases the plan which was employed in this should be rigidly adhered to; for any means which will produce a powerful impression, even though applied at a remote point, may accomplish the desired object. The chief indication to be answered is the diversion of volition, and any treatment which responds to it is legitimate.

There is a class of cases bearing a close resemblance

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to the foregoing examples of excess and diminution of the sense of muscular power, which is frequently met with in surgical practice.

Case III.—A young lady, in the summer of 1864, sprained her ankle, but continued to limp about for three weeks, in spite of the pain and annoyance which she caused herself. The injured part, however, became worse instead of better, and she was obliged to resort to crutches in order to move about. But still recovery did not take place, and every subsequent attempt to walk was attended with swelling and severe pain in the joint. She resorted to a variety of methods to procure relief; but counter-irritation, pressure, rest, etc. were alike unavailing. Four years after the reception of the injury she came to our office on crutches for consultation. An examination failed to reveal any evidences of existing injury to the joint, and, beyond a slight atrophy of the muscles from disuse, there were apparently no reasons why the foot should not perform its office. A favorable prognosis was therefore rendered, based upon the opinion that her inability to walk was simply due to local functional derangement. She was told that the original injury had long ago been recovered from, but had left behind a hyperæsthetic condition of the nerves, which had hitherto prevented her from regaining the use of her foot; and she was made to understand that a well-directed effort of the will would probably be effectual in its removal. Her sister was instructed to flex her foot, and to offer a slight resistance with her hand against its extension, several times each day, gradually increasing the opposing force. In three weeks she returned, and exhibited considerable power in the limb, while the abnormal sensibility was greatly diminished. She was then directed, in addition to the previous treatment, to push with her foot against the wall, and after a few days to rise upon her toes, while supported by her crutches. In six weeks she progressed so far as to be able to give up her crutches altogether; her ankle rapidly regained strength, the hyperæsthesia was entirely subdued, and recovery was complete.

There is no doubt that impaired motility and lameness after joint-diseases and injuries of the lower extremities are often due to nervous affections of this character; and the surgeon who is able to recognize their existence as the potential cause of impaired function in a limb, may, by a correct application of proper treatment, restore to a life of usefulness many of his patients who would otherwise be cripples.

(To be continued.)

CONGENITAL MALFORMATION OF THE GENITAL ORGANS.

BY WHARTON SINKLER, M.D.

A MALE infant, aged three weeks, was brought to me at the Dispensary of the Episcopal Hospital in the spring of 1869, with the following malformation of the genital organs, which the mother stated had existed since birth:

The integument of the penis, instead of uniting in the median line on the under surface of that organ, was directly continuous with the scrotum, binding the penis closely down on the testicles, and giving it an extremely odd appearance. With this exception, the penis was normal, and otherwise the child was well developed.

The mother was advised to wait until the child became older before any operation should be performed.

On June 9, 1869, the child being five months old, it was etherized by Dr. E. I. Santee, and I proceeded, with the assistance of Dr. J. H. Packard, at the residence of its parents, to perform the following operation. The skin was dissected up on each side of the penis, for about one and a half inches, the corpus spongiosum and testicles being carefully avoided. The cut edges on the under surface of the penis and on the scrotum were then brought into accurate apposition by means of the hare-lip suture, a few strips of plaster used to support the whole, and a dressing of dry lint applied.

No retention of urine followed the operation, and in two weeks the cut surfaces were firmly united, without any unfavorable symptom having occurred.

At the present time, the penis presents a natural appearance, although it is somewhat shorter than usual on the under surface, and has a slight tendency to curve downwards while in the flaccid condition; but when in a state of erection it becomes straight, and assumes a position at right angles to the body.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. JOHN S. PARRY.

THROMBOSIS IN A PUERPERAL WOMAN. PNEUMONIA. TEMPORARY AORTIC REGURGITATION. DEATH. AUTOPSY.

ON the 9th of the month, a remarkably strong, healthy-looking girl was delivered in the wards. The child weighed ten pounds and twelve ounces. The labor was very rapid, and the perineum was ruptured nearly to the sphincter ani. At the end of twelve hours sutures were introduced, opium given to constipate the bowels, and the urine drawn off by a catheter. Everything seemed to go well until the sixth day after delivery, when her tongue was furred, face flushed, skin pungently hot, and her pulse full, bounding, and over 100. The axillary temperature was 104½° Fahr. At the same time she had a slight hacking cough, without much dyspnœa or any pain in the thorax. Auscultation, however, revealed the presence of a crepitant rhonchus in the upper half of the left lung. At the same time, there was some tenderness over the lower portion of the abdomen, and she was delirious at night. These symptoms continued during the ensuing three days, when the temperature had fallen to 100° and the pulse to 96 per minute. The disease of the lung had meanwhile passed on to solidification.

During the succeeding four days she appeared to be doing well, and we believed that convalescence had commenced; but on the 22d she was again seized with symptoms similar to those previously described. The temperature was 104½°; the skin was pungently hot, and there was a pneumonic flush on both cheeks, while the cough was increased, and her pulse was about 110 per minute. Her tongue was now dry, and there were sordes on the teeth. Physical examination revealed pneumonia of the right base. The heart-sounds were normal.

On the 23d she complained of pain in the right thigh, and, upon examination, a red, hard, line was found extending up the inner side of the thigh, from the knee to the saphenous opening. The saphena vein and some of its branches were occluded. There was also some tenderness over the lower portion of the abdominal cavity, especially on the right side.

Two days later, we were surprised to find the pulse with all the characteristics of aortic regurgitation, and it was audible when the arm was elevated, while the pulses were distinctly visible in the carotid, temporal, and femoral regions. Upon auscultation there was discovered a very intense aortic murmur, rough in its quality and double. The first sound of the heart was comparatively strong.

She was now excessively weak, and we expected her to live but a few hours; but she survived five days longer, and perished on the 30th of the month. On the second day after its appearance the intensity of the aortic murmur was diminished, and on the third it had entirely disappeared; but the second sound had not reappeared, and the first was weak and muffled, though the woman's strength had materially improved in the interval. At the end she died apparently from exhaustion.

Autopsy.—Fourteen hours after death there was a good deal of lividity of the dependent portions of the body. Rigor

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mortis slight. On opening the thorax, an abscess containing about two drachms of pus was discovered at the left sterno-clavicular articulation. About one inch and a half of the anterior surface of the clavicle was denuded of its periosteum. The upper half of the left lung was adherent from a recent pleurisy. The two lobes were also united by recent inflammation. The whole of the upper lobe and the superior half of the lower lobe were pneumonic, the upper portion of the former being in the third and the remainder in the second stage of the disease.

The lower lobe of the right lung was also inflamed, but had only reached the second stage of the disease, or that of red hepatization. In the upper lobe of this organ (the right), there were three or four nodules of inflamed tissue likewise in the second stage. These varied in size from half an inch to one and a half inches in diameter, and upon section presented the usual appearances of pneumonia in this stage of its progress. The lungs were everywhere entirely free from tubercles.

Heart.—Size normal. Valves entirely competent and healthy, except two or three minute spots upon the aortic leaflets, which had the appearance of commencing atheromatous degeneration. The left venrticle contained a large, dense, decolorized coagulum, which was so firmly attached to the interior of the organ that the heart could be lifted from the table by taking hold of the clot. It was continuous with a smaller coagulum in the auricle, and extended from the ventricle along the aorta a little beyond its arch, effectually destroying the functions of the aortic valves. The right ventricle and auricle contained a similar mass, which passed a long distance into the pulmonary artery. When it was withdrawn it formed a cast of that vessel.

The abdominal organs were healthy. The uterus presented the appearances usual at this time after delivery. There was no disease of the sinuses, nor were there any evidences of either pelvic cellulitis or pelvic peritonitis.

The right iliac vein contained two large decolorized coagula, which were loose and movable in the vessels, the walls of which were not thickened or inflamed. The walls of the femoral vein were also healthy. At the point where the saphena vein emptied there was a large, dense clot, nearly an inch long, projecting into the femoral vein. This was composed of two parts. The outer thin membranous portion was easily removed, when the central mass separated into a number of long, slender coagula, some of which were united in such a manner as to show that they had been formed in the saphena vein and its branches, and that they had only lodged at the point where they were discovered.

The coats of the saphena vein and some of its tributaries were much thickened, injected, and entirely occluded by coagula, which had begun to soften in the centre. This condition extended down to the knee.

We regret very much that the lungs were not more carefully examined in this case. The coagulation of blood in the pulmonary artery was certainly very extensive, and I feel convinced that the inflammation in upper lobe of the right lung had its beginning in embolism, but am by no means certain that the disease on the left side was due to such a cause. It pursued a very irregular course, however, for simple acute pneumonia. The temporary aortic regurgitation was the most interesting feature of the case. About the nature of the sound I have no doubt. It was carefully studied by my colleague, Dr. Duer, and he fully confirmed the original diagnosis. The audible pulse was most perfectly developed, and disappeared with the murmur. I have never met with this in any other condition than that of aortic incompetency, and believe it to be always present in that disease. I am confirmed in this opinion by a large number of post-mortem observations.

GUARANA.—The active alkaloid of this (Guaranine of Dr. T. von Martius) has been shown by Stenhouse (M. C. Cook, M.A., *Pharmac. Journ. and Trans.*, September 17, 1870) to be Theine. The drug contains 5.07 per cent. of the latter,—twice as much as black tea, five times as much as coffee. The drug is largely prepared in Brazil by the Indians, and on the Rio Negro has been sold as low as a penny a pound.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROFESSOR GROSS.

Reported by James Graham, M.D.

COMPOUND DEPRESSED FRACTURE OF THE SKULL. TREPHINING.

WILLIAM MITCHELL, 9 years old, was brought to the clinic on the 8th of October, by his father, Dr. Mitchell, having the day previous been thrown from a horse, lighting on his head. His father, on picking him up, discovered a wound about an inch in length, extending from a short distance above the left eyebrow upward and outward; it was attended with fracture of the frontal bone, with marked depression. The boy was not stunned by the fall, and he bore the journey—undertaken almost immediately after the accident—to the city, a distance of 160 miles, without any apparent suffering or injury.

Professor Gross, on examining the parts, found the condition described above, and, in consultation with his colleague, Professor Pancoast, decided to trephine. Chloroform having been administered, he enlarged the wound, and removed a disk of bone, with a small trephine, from the outer side of the depression, and restored the bone to its natural level. The dura mater at the site of injury was somewhat injected, but perfectly sound in other respects. The parts were brought lightly together by suture, and covered with a wet compress secured with a bandage. At 8 P.M., six hours after the operation, the patient was restless, his pulse excited, and his skin hot and dry. He was taking hydrarg. chl. mitis, grs. iij, with pulv. jalap, grs. vj, every three hours, and a febrifuge composed of sp. mindereri, sp. etheris nit., tr. verat. virid., and deodorized tr. opii.

Six foreign leeches were applied to the left temple at midnight, and gave him decided relief; his bowels had been freely purged, and he rested well after the bleeding. During the following day he was comfortable; his diet was restricted, and senna and sulphate of magnesia were substituted for the calomel and jalap.

He continued to do well until the 14th, when his father, on account of urgent professional engagements, was compelled to take him home. Fortunately, no ill effects ensued; on the contrary, he continued steadily to improve, and is now, nearly two months since the accident, entirely well.

Professor Gross, in commenting upon the operation of trephining, alluded to the disfavor with which it is at present regarded by military surgeons, and then alluded to his own convictions that its danger, in ordinary cases and in persons of good constitution, is greatly overrated. The danger of allowing a depressed bone to remain in its unnatural situation was, he said, twofold,—immediate, from inflammation, and remote, from epilepsy and other bad effects. This is especially true of small, depressed fractures, which, by their pressure upon the brain and its membranes, nearly always induce inflammation, not unfrequently terminating in death in a few days. When the pressure is widely diffused, the danger, other things being equal, is comparatively slight. In punctured fracture the danger is proverbial. Children, from the peculiar susceptibility of the nervous system, are particularly prone to suffer from epilepsy and other nervous symptoms on recovering from the immediate effects of such injuries, where the bone is permitted to retain its depressed situation.

Great stress is properly laid upon the after-treatment in injuries necessitating such an operation. The head and shoulders should be kept constantly elevated; the hair should be cut off close, and the scalp covered with a bladder partially filled with ice; light and noise should be excluded from the apartment; the diet should be restricted to the smallest allowance; the bowels should be freely evacuated with calomel and jalap or senna and Epsom salts; and if headache, accompanied by high fever and restlessness, arise, blood should be taken freely, by leeches, from the temples or behind the ears, or even from a vein at the bend of the arm. The old method of treatment after such injuries is too much neglected at the present day; we feed too much and deplete too little.

A patient with fracture of the skull—especially one requir-

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ing the use of the trephine—should consider himself for a long time an invalid, avoiding all excitement, both of mind and body, observing great care in his diet, and keeping his bowels constantly in a soluble condition. From want of proper precaution, many a person has lost his life from the effects of inflammation of the brain, weeks and months after all danger was supposed to have been safely passed.

CYSTIC TUMOR OF THE LOWER JAW, WITH GIANT-CELLED ELEMENTS.

James H. B., 14 years of age, of Chester, Pa., came to the clinic on the 12th of October, on account of enlargement of the lower jaw of from two to three years' duration. His chin was a little prominent, especially on the left side; and on opening his mouth, the bone was seen to be expanded, thereby forming a tumor of ovoidal figure and of regular outline, extending from the canine tooth of the right side to the first molar of the left. The alveolar border of the growth was soft, and crackled like parchment when indented. The gum was natural in color; he had lost several teeth over the tumor, and the remaining ones were loose. No cause could be assigned for its appearance; it was devoid of pain, except a slight aching during the last three weeks; its progress had been slow, but within the past three months it had about doubled itself. His grand-aunt died of cancer of the breast.

Having diagnosed a cystic tumor, Professor Gross made an incision into it on its anterior surface with an ordinary scalpel, and a thin, brownish fluid escaped. There was a large mass of a substance resembling fungous granulations attached to the inner wall of the cyst, which was scraped away with the chisel. The operation was attended with profuse hemorrhage; but it was promptly controlled by plugging the cavity with cotton wet with Monsel's solution.

The central portion of the mass bore a suspicious resemblance to encephaloid, and, on microscopic examination by Dr. W. W. Keen, he found "the small scraps of the central portion of the tumor, which were gouged out, looked exactly like the heart's muscles, and were scarcely less dense. When teased out, 'myeloplaxes,' or 'giant-cells,' or 'multi-nucleated' cells, were seen. The giant-cells formed, probably, the fourth or fifth of the entire mass, and were very remarkable for their bizarre forms and numerous prolongations or processes. The number of nuclei was from ten to thirty, and nearly all possessed one, and often two, brilliant nucleoli.

"The spindle-shaped and other forms of caudate corpuscles, and round or ovoid cells, constituted the remainder of the mass. These, also, were generally nucleated and nucleolated. Scarcely any intercellular tissue was observed, and fatty granules were very rarely found to any extent, save in two or three places. So far as could be judged without injection, the mass was not very vascular."

The plug was allowed to remain for several days, until it had become loosened by suppuration, when it was removed, and a piece of patent lint wet with sweet oil was substituted. After a few days, the tents were dispensed with, and the cavity was then syringed out every few hours with a weak solution of permanganate of potassa. There was a little erysipelas after the operation, with difficulty in swallowing and a circumscribed hardness beneath the chin; but it disappeared under the usual treatment, and he was discharged, feeling quite comfortable, on October 26.

He reported at the clinic, on November 5, in good general health, and with the cavity in the jaw much diminished in size.

NEW ALKALOIDS OF OPIUM.—O. Herse states that he has succeeded in demonstrating the complexity of the porphyroxine of Merck, and obtaining from it five alkaloids, which he denominates lauthopine, meconidine, codamine, laudanine, and *x*. Codamine and laudanine are homologues of morphia and codeia. Lauthopine is the superior homologue of papaverine. The method of preparation and chemical history are given in detail; but want of space forbids a more copious abstract. The original paper is to be found in *Annalen der Chem. und Pharm.*, vol. cliii. p. 47; an abstract is in the *Pharmaceutical Journal* of London, Sept. 1870.

ON DEATH FROM CHLOROFORM. (*Medical Times and Gazette*, July 23, 1870.)—In this clinical lecture, Dr. B. W. Richardson claims that there are four ways in which chloroform causes death: namely, by—1. Syncopal apnœa; 2. Epileptiform syncope; 3. Paralysis of the heart; 4. The combined depression of chloroform and surgical shock.

Death from the first cause occurs within the minute after the commencement of the inhalation: by the action of the vapor on the peripheral nervous system, respiration is suspended for an interval, there is accumulation of carbonic acid in the blood, irritation of the vagus, and arrest from the irritation, by virtue of the inhibitory function of the nerve, of the action of the heart.

The second class of deaths occurs in those in which the second stage of narcotism—the rigid, excited stage—is severe and prolonged. All the arteries share in the muscular excitement, and by their intense contraction force all the blood into the venous system, and hence syncope occurs from want of arterial blood.

Deaths of the third order occur only when the action of the narcotic has been slow and long continued, and has finally resulted in general muscular paralysis, in which the heart partakes.

In speaking of deaths from the combined effects of chloroform and surgical shock, Dr. R. details some curious observations made by himself upon this point. Thus, in a case of breaking up of old adhesions of the knee-joint, the patient being profoundly narcotized, he noticed abrupt momentary cessation of the heart's action immediately following each effort at forcible extension of the knee, and this upon several different occasions.

In the latter part of this lecture, Dr. R. speaks of the best method of resuscitating patients apparently dead from chloroform inhalation, and recommends, as the result of a large series of experiments upon animals, absolute quiet of the body, *avoidance* of use of electricity, and artificial respiration, kept up by means of the double-acting bellows, described by him in the previous volume of the journal.

He thinks every private and public operating-table ought, by all means, to be provided with one of these as a permanent fixture.

INFLUENCE OF EXERCISE ON ELIMINATION BY THE KIDNEYS.—In the October number of the *New York Medical Journal* we find some interesting experiments by Prof. Austin Flint, Jr., made upon the pedestrian Weston last May, with the view of testing the influence of excessive and prolonged muscular exercise upon the elimination of effete matters by the kidneys. Mr. Weston walked one hundred miles in less than twenty-two hours, in an inclosure in New York City, and the urine passed in that time was collected in one vessel, and afterwards compared with urine subsequently passed when he was at comparative rest. The experiments are, therefore, not so valuable as they might be, for they were made with solitary specimens, and may not be confirmed by further observations. Prof. Flint found the quantity of water in the urine immensely greater during exercise; the amount of urea largely increased—as much as from 75 to 100 per cent., after making due allowance for the effect of diet; the proportion of chlorides but little affected; the sulphates considerably increased; the phosphates quadrupled; and the uric acid augmented by about 78 per cent., although the proportion per fluidounce was less than in repose. His conclusion is that excessively severe and prolonged muscular exertion increases enormously the amount of nitrogenized excrementitious matters in the urine, particularly the urea, and produces a corresponding increase in the elimination of most of the inorganic salts.

DR. BROWN-SÉQUARD (*London Lancet*, p. 486, Sept. 24), at the recent meeting of the British Association for the Advancement of Science, reported the results of some interesting experiments on the brains of different animals, tending to show that the right side of the brain was more important for organic life than the left side, and that, although the two sides of the brain were precisely alike when the animals were born, by greater development of the activity of one side it afterwards became quite different from the other. He showed also that epilepsy induced in the guinea-pig could be transmitted to its offspring.

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THE MEDICAL TIMES.
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EDITORIAL.

THE CAUSE OF THE SICK AND WOUNDED IN FRANCE.

THE surgeons and physicians in civil life in France have, from the commencement of hostilities, shown a zeal which does them honor, in promptly volunteering their services in behalf of the sick and wounded. Senators and government officials, proprietors of palaces, press-editors, and representatives of great corporate institutions, have vied with each other in efforts to provide for the hospital accommodation of the soldiers. Early in July we find a pompous proclamation from the International Aid Society: "War is declared! Every Frenchman should aid his country according to his ability," etc.; and the committee appeal to the devotion and patriotism of civil physicians, and invite those who wish to serve in the volunteer ambulances to register their names. It further expresses the hope that the *Intendance*, instructed by the Crimean and Italian campaigns, will interfere less, and will respect the excellent example of the United States, and leave the direction of surgical affairs to men whose special studies have qualified them in questions relative to the hygiene and treatment of the soldier. Thereupon M. Ferrand, of the *Union Médicale*, advises that a Committee of Medical Reserve be formed, a list being opened at the bureau of that journal, remarking that private practitioners may relieve the military surgeons of their onerous duties by operating after great actions, a task which they ordinarily undertake with complacent alacrity. On July 23, the possibility of an invasion of France seems not to have been surmised. The following week a committee of editors, headed by Girardin and Tarbé, of the *Gaulois*, invite subscriptions to fit out the "Press Ambulance Corps." The International Aid Society asks for contributions of money, medicines, etc. Dr. Evans, the dentist, invokes Americans in Paris to open a subscription in aid of the sick and wounded, and presents the committee with an extensive collection of articles used by the United States Sanitary Commission during the American civil war. M. Chenu publishes an article on the numerical insufficiency of the medical staff. In the French army, besides the regimental medical officers, two or three to a regiment, there are attached to each army corps five ambulances, or what we should term five parties of staff-surgeons with field outfits. One is attached to the corps headquarters, and one to each of the four divisions composing the army corps. There are five medical officers for each ambulance, or twenty-five to a corps. M. Chenu thinks this number should be doubled or tripled, if possible, and laments that "the scenes after Magenta and Solferino" seem not to have opened the eyes of the administration. The Institute of France has accorded to M. Chenu its grand prize for his surgical statistics, completed in 1869, of the Franco-Austrian war of 1859. M. Bonnefort prints a pamphlet in the interest of the regular medico-military staff, and points out the want of system, extravagance, etc. of the volunteer aid societies.

The *Union Médicale*, on August 13, recommends the organization of a special surgical staff in each *arrondissement* of Paris, and a few days subsequently announces that such associations have been formed, that bedding, lint, and money are pouring in, and that over one hundred and fifty hospitals of from ten to eighteen beds have been fitted up in the twelve *arrondissements*; and all this without the cost of a sou to the government. The hospital of the Press Association is to be attended gratuitously by MM. Demarquay, Guérin, Cloquet, Béhier, and other dignitaries of the Academy of Medicine; the Archbishop of Paris is chief almoner, and the Brothers of the Christian Schools are to serve as nurses. The Dominican nuns at Neuilly offer their fine convent, and to provide thirty beds. Donors of bedding are informed by the committee that iron bedsteads alone will be accepted. The senators had given up the Luxembourg palace, and subscribed for three hundred beds, each senator giving one thousand francs. M. Nélaton had general direction of this hospital, and MM. Boyer and Paul, physicians to the senate, had fixed their residences at the palace, to be near the patients. An excellent hospital of thirty beds was established in Madame Chabrier's hotel, Rue de Trevise; another, much larger, in André's great hotel in the Rue du Faubourg Poissonnière; a third, chiefly by the efforts of M. Coquart, upholsterer, in the Rue des Petites-Ecuries; and a fourth in the house of the parish priest.

A hundred surgeons and nurses, at Lyons, were organized, ready to go at any moment to the field, to make needful dressings and operations, and to return, so as not to encumber the army. But they were to have no military costume, no horses, no supply-wagons; a forage-cap and chevron, with the red Greek cross of the Geneva Convention, an operating case, and a hospital knapsack, constituted the outfit. On August 22, a party of Neapolitan surgeons, declining all emolument, and twelve Swiss surgeons of the federal army, left for Marshal McMahon's camp. The French editors are not displeased to know that "dysentery and typhus are not the only diseases prevailing in the Prussian army. On account of their forced marches and uncleanliness, the Prussians rarely remove their shoes and socks, and foot-soreness is almost universal among them. On account of the lymphatic temperament of our enemies, these affections assume almost immediately such gravity as to necessitate absolute rest." A

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correspondent informs the editors that the majority of the Prussians are affected by choleriform diarrhœa. In spite of these embarrassments, however, the Germans were able to move as far as Strasbourg, Sedan, Metz, Orleans, and Paris. Towards the end of August, an English red-cross benevolent society sent five hundred pounds each to the presidents of the International Aid Societies at Paris and Berlin, and six surgeons, headed by Dr. Mayo, the expenses of the delegations being defrayed by the society. The Italian colony in Paris fitted up a large hospital for the wounded, and accumulated a large fund by subscription. On August 27, several public buildings were turned over for hospital purposes, and converted into an immense hospital, under the direction of M. Ricord, who received daily, at three o'clock, physicians and surgeons desiring to volunteer to take charge of the wards. The Minister of State writes to the Minister of War that he will relinquish his hotel in the Rue de Grenelle for the use of the wounded. The free school of the Immaculate Conception, with its seven hundred beds, a well-furnished pharmacy, kitchen, etc., is next offered; MM. Maisonneuve, Bacquoy, and others volunteering as surgical attendants.

The *Moniteur Universel* complains bitterly of the treatment of French surgeons captured at Schafbuch, up to the time of the arrival of Prince Frederick Charles, when they were permitted to rejoin their corps; but adds that as soon as his back was turned his generals imposed on them the most severe and onerous duties, at Wissembourg, Woerth, and Reichshoffen, and then, depriving them of their surgical instruments, sent them into Belgium. The corps of surgeons sent to the field by the Press Association were captured, according to the *Gaulois*, at Saarbrück, and, after many tribulations, returned through Brussels to Paris, under guidance of Dr. Marc Sée. A superior medical officer, M. Milliot, was killed while extracting a ball on the field. Dr. Queyriaux suggests, as a novelty, the use of oakum as a substitute for charpie. On September 10, the *Gazette Médicale* announces that, from circumstances beyond its control, its publication must be suspended.

Our latest advices from the French capital are those contained in this number. We find here a variety of hasty memoranda by busy men: so many wounded, such and such operations done, etc. etc. We note but little statistical information that can be regarded as reliable, and but few facts of special significance to the student of military medicine and surgery. The arrival at Versailles of those wounded at Reichshoffen is referred to, as well as the return of a dejected party of volunteer surgeons from Saarbrück; the reception from Copenhagen of sixteen thousand francs for the wounded, and from Glasgow of dressings and supplies in panniers, to be carried on pack-saddles. Great numbers of private physicians are announced as ready to attend the sick and wounded. Dr. Duchenne offers to use electricity on those who require it. Many private persons offer their hotels and from ten to forty beds. The National Deaf and Dumb Asylum is converted into a military hospital, and the large buildings occupied by the General Omnibus Company, the National Life Insurance Company, together with many public hotels and government buildings, are appropriated for similar purposes. One of the stock companies had tendered, at the instance of Monseigneur Bauer, not only its splendid house, but had defrayed the expense of erecting temporary pavilions, from designs furnished gratuitously by the celebrated architect M. Gustave de Thoury. The deliberations of the Academy of Medicine and other learned societies were devoted exclusively to questions of military medicine and hygiene, and particularly to the subject of disinfectants. M. Devergier lauded phenic acid as a preservative for dead bodies, and another academician had seen a subject injected with this acid solution, in which there was no unpleasant odor six months after death. MM. Laboulaye and Michel Chevalier, in the *Revue des Deux Mondes*, and M. Lefort, in the *Gazette Hebdomadaire*, have exposed the vices of organization of the medical staff of the army, and illustrated, from experience in the Crimean and Italian wars, the evils of denying medical officers control of their own department; and M. Vidal, a retired surgeon of division, has printed an important paper* on the deplorable results, in the army in Algeria, of the subordination of the surgeons to the *intendants militaires*. But these warnings all came too late, and, in the midst of unparalleled disasters, were comparatively unheeded. It is most gratifying, however, to learn that all that can be accomplished by the utmost unanimity, devotion, and self-sacrifice has been promptly done by the French to prevent the unfortunate victims of the war from suffering from the grave deficiencies of the official army medical organization.

THE MEDICAL CORPS OF THE NAVY.

ACCORDING to existing laws, the number of medical officers on the active list of the navy is limited to eighty surgeons, and one hundred and twenty assistant and passed-assistant surgeons. They are all commissioned officers,—that is, they are appointed by the President, by and with the advice and consent of the Senate of the United States.

The laws provide that no person shall fill the office of assistant-surgeon until he shall have been examined and approved by a board of naval surgeons designated by the Secretary of the Navy. The candidate must be a citizen of the United States, not more than twenty-six years of age, in vigorous health in all respects, and his character as to morality, temperance, and industry without reproach.

The government desires to engage in its medical service only men of the best average intellect and culture, because it considers officers and privates in the navy too valuable to be confided, while sick or wounded, to those who are incompetent or unreliable. To secure

* Paris, Germer Baillière, 1870, 8vo, pp. 150.

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trustworthy practitioners, the examination is made to include general aptitude for the office,—that is, capacity to readily bring into practice natural qualifications and acquired knowledge in an efficient manner,—literary and scientific attainments, and general information, as well as all the branches taught in respectable medical schools. The scrutiny is carefully and fairly conducted. The examinations are partly written and partly oral, and candidates are afforded opportunities to show practically their knowledge of pharmacy, diagnosis, and "mechanical therapeutics." But, in spite of all this care, it is surmised that individuals of only moderate practical ability are sometimes admitted into the corps.

These, however, may be eliminated, because after five years' service the assistant-surgeon is entitled to be examined for promotion. Then he is required to submit to the board testimonials of his official conduct from those superior officers with whom he may have served. If found qualified, he is styled passed assistant-surgeon. If found not qualified, he is entitled to a second trial after the expiration of one year; and if he again fail, he is dropped from the navy. (*Sec.* 8, "Act making appropriations for the naval service for the year ending June 30, 1871, and for other purposes," approved July 15, 1870.)

The law provides, also, that "no person shall be appointed a surgeon until he shall have served as an assistant-surgeon at least two years on board of a public vessel of the United States at sea, nor until he shall have been examined and approved for such appointment by a board of naval surgeons designated by the Secretary of the Navy."

In case of vacancy in the grade of surgeons, an assistant-surgeon, under this provision of the law, may be examined, and, if found qualified, promoted, after having served only two years at sea. But, in time of peace, vacancies from death, retirement, and resignation are so few that the thirty-one senior surgeons now on the active list served from ten to sixteen years prior to promotion. In the years 1862, 1863, and 1864, during the rebellion, nine assistants were promoted after little more than three years' service. Since that time the period of service prior to promotion has gradually increased until the present date, when it averages about eight years. Only seven surgeons of the eighty now on the active list have been promoted long enough to entitle them to receive the highest rate of pay; the period of their entire service is from thirty-three to forty-one years.

In the year 1824, chiefly through suggestions of the late Surgeons Edward Cutbush, W. P. C. Barton, and Thomas Harris, the qualifications of candidates for admission and promotion in the medical corps were tested by examination, for the first time, under a regulation of the Navy Department. The compensation was very small. It was found difficult to induce respectably qualified practitioners to engage in the naval medical service, or to remain any considerable time after they had entered it. Mainly at the instigation of the late Surgeon Mordecai Morgan and the gentlemen just named, a law, devised to obviate the difficulty, was enacted by Congress in May, 1828. The compensation was increased periodically with increased periods of service, the system of examinations was established, and the grades of surgeon and assistant-surgeon were recognized in the law. The title of passed assistant-surgeon, which appears for the first time in the Navy Register of 1835, was a creation of the Navy Department, and was not employed in any statute prior to June 1, 1860.

The law provides a rate of pay for assistant-surgeons who remain in the grade more than five years prior to examination for promotion; and also for those who, after they have been examined and found qualified, await promotion more than five years. Though they are styled passed assistant-surgeons, their sphere of official duty is not legally changed. In commission they are still assistant-surgeons.

The increase of annual compensation progressively with every five years' service is exhibited in the following

Table of the Rates of Pay of Medical Officers in the Navy of the United States.

	Waiting orders.	Duty on shore.	Duty at sea.	Retired.
Assistant-surgeons	$1000	$1400	$1700	$850
Assistant-surgeons, after five years' service	1200	1600	1900	950
Passed assistant-surgeons	1500	1800	2000	1000
Passed assistant-surgeons, after five years' service	1700	2000	2200	1100
Surgeons, first five years	2000	2400	2800	1400
" second five years	2400	2800	3200	1600
" third five years	2600	3200	3500	1750
" fourth five years	2800	3600	3700	1850
" after twenty years	3000	4000	4200	2100
Fleet-surgeons	.....	.....	4400	.....

The office of "surgeon of the fleet," or fleet-surgeon, was created by the act of May, 1828. The law provides that the President may appoint to every fleet or squadron an experienced and intelligent surgeon, denominated "surgeon of the fleet," who, in addition to his duties as surgeon of the flag-ship, shall examine and approve all requisitions for medical and hospital stores for the squadron or fleet, and inspect their quality; in difficult cases, consult with the surgeons of the several ships; and make and transmit to the Navy Department records of the character and treatment of diseases in the squadron or fleet. For these additional services a small addition to his compensation was provided, measured, in every instance, by his length of service. The pay of surgeons was then at a monthly rate, which was increased, at the end of five years' service, five dollars and a ration; the surgeon of the fleet was "allowed double rations while acting" as such. But under the present scale of pay a surgeon of five or ten years' standing receives as much, while discharging the duties of fleet-surgeon, as one of over twenty years' service. The want of distinction in this respect is calculated to invite interposition of political or other extraneous influences to procure for young surgeons the appointment of fleet-surgeon, at the cost of discon-

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tent among those seniors who may be in this manner unfairly set aside.

The office is temporary. As there are but six fleets or squadrons maintained, there are only six surgeons of the fleet temporarily employed at the same time.

Officers are placed on the retired list on account of incapacity arising from wounds, injuries, or permanent loss of health incurred in the line of duty; and on attaining sixty-two years of age, whether incapacitated or not.

Paymasters and steam engineers have the same pay and rank as medical officers.

Surgeons of more than twelve years' standing rank with commanders of the line; surgeons of less than twelve years', with lieutenants; passed assistant-surgeons, next after lieutenants; and assistant-surgeons, next after masters; but the precedence which attaches to these degrees of rank is made to yield in the presence of commanding and executive officers of the line of every grade and degree of seniority. So that, in fact, rank is purely nominal, and practically means nothing beyond a right to wear a uniform dress analogous to that of the line grade with which the staff officer nominally ranks. It may be truly said that, in fact, medical officers in the navy have no rank, properly so called. It is said, however, that Congress at its next session may remove this ground of just complaint.

Young gentlemen who enter the navy now may expect to receive the highest rate of pay at the expiration of about thirty years, and, if they remain in a state of celibacy, the means of respectable subsistence in the mean time. Like every profitable vocation, that of the physician requires a pecuniary capital to establish such a business as may ultimately lead to fortune. To those whose means are not sufficient to enable them to maintain a respectable social position while seeking professional employment in private life, the navy offers a certain and respectable career, but without the chances of any considerable accumulation from professional exertion.

This summary will enable our readers to estimate the value of employment in the medical department of the navy, in which there are, we are informed, about fifty vacancies.

THE London agent of our publishers has forwarded to them a letter written by the editor of the London *Medical Times and Gazette*, taking us to task for having appropriated, as he alleges, the name of his journal. The accusation is a singular one. There certainly is a marked difference between "Medical Times" and "Medical Times and Gazette." But, even supposing that there was no material difference in the names of the two periodicals, does the learned editor mean to say that we have no right to select what title we please for our journal? Has he a pre-emption right, as the tenor of his letter would seem to imply, to the word "Times"? One would suppose, from the tone of his remarks, that, like the Emperor of Timbuctoo, he was the Emperor of the Sun, the King of Kings, the Buffalo of Buffaloes, and the Bull of Bulls. We are sorry we cannot offer our brother editor any consolation in his grievous affliction, and sincerely hope that the alleged offence may not be a cause of war between the two countries.

CORRESPONDENCE.

DERMATOLOGY ABROAD.

LETTERS FROM L. A. DUHRING, M.D., OF PHILADELPHIA.

No. II.

PARIS, June 17, 1870.

HAVING given a short description of some of the leading points of dermatology as existing in Vienna, I now propose collecting a few facts concerning the hospitals of this city, which may prove suggestive. The "St. Louis," which is devoted to the treatment of diseases of the skin, is situated near the Strasbourg depot, and several miles from the centre of the city. It is very old, having been founded in 1644, and, like most of the other charitable institutions of Paris, is under government patronage. The building is a hollow square, with wings thrown out on various sides, and, upon entering the enclosure, presents an imposing appearance. It is the largest hospital extant devoted to skin diseases, the whole, with the exception of two surgical wards, being given to that purpose. There are about twenty skin wards, each accommodating thirty patients, and, supposing them all to be occupied, six hundred patients may generally be found here. This is the only hospital in Paris where such diseases are treated. The wards are long, with high ceilings, the ventilation good, and the minutiæ in every respect well carried out. The hospital staff is composed of six gentlemen, viz.: MM. Bazin, Lailler, Hardy, Guibout, Hillairet, and Vidal, each one having charge of four wards, two male and two female, which require daily attendance the year round. They are assisted by their respective "*internes*," besides three or four aids, who write prescriptions, dress and bandage the cases, etc. Every morning at 8½ o'clock there is an examination by one of the staff, when patients applying at the hospital for admission are seen. If suitable cases, they are admitted; otherwise they are treated as dispensary cases. Each of the staff is on duty one day in the week in the reception-room, or "consultation," as it is called. Here every morning from one to three hundred new cases are seen, casually examined, and cared for. The patients are assembled in a large waiting-room adjoining the reception-room, furnished with benches, and are admitted three or four at a time to the physician with his interne and auxiliaries. Out of the whole number seen, the most important cases are received, according to the number of beds vacant in the wards of the physician examining, and those who cannot be taken in for lack of room are told to return on the morrow. The "consultation" occupies, generally, two or three hours, and certainly no place in the world offers the same amount and variety of material as the St. Louis. On an average, one hundred and fifty new cases may be seen and examined every day, and the most interesting of these are taken into the wards, where they may be studied from day to day, and watched until their discharge from the institution. Yet, in spite of these numerous advantages for study, and the abundance of material always present, the young student of dermatology finds but little inducement

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to remain here; for he soon discovers that he is not able to obtain elementary instruction. Without this, of what benefit is it to a beginner to see daily a hundred new cases, or to walk through the wards, taking hurried glances at the patients as he follows the physician from bed to bed? Unable as yet to diagnose the simplest case with certainty, not knowing, perhaps, the anatomy of the skin, and unused to the nomenclature, he is bewildered by the sight of such a mass of material, with no one to give him clinical instruction. Professor Hardy is the only physician at the St. Louis who undertakes to instruct students systematically. During the months of May and June he delivers a course of lectures, and also takes his class through the wards several times a week. For the rest of the year there is no regular instruction whatever, and any one desirous of studying the subject is obliged to ask permission to attend the consultations and accompany one of the staff on his morning visits, thus gaining what instruction he may. How different the state of affairs in Vienna, where instruction is so freely and competently given all the year round, and facilities offered for intercourse with able teachers, who by their own enthusiasm stimulate the student to master his subject! For the beginner in dermatology, Paris is certainly far inferior to Vienna; while, on the other hand, to one who has already made some progress and is fitted to exercise his own judgment, Paris offers great attractions. One of the features of the St. Louis is the scabies cure,—or quick cure, as the Germans call it. Scabies is plenty in Paris all the year round; in fact, no other city contains as much. Nor is it confined to those who frequent the St. Louis, but is widely disseminated throughout the whole city, among the upper classes as well as the poor. Patients come in scores to the hospital, and, on an average, fifty cases of scabies are treated daily. Two apartments supplied with baths are appropriated to it, one for men and the other for women, the mode of treatment being very much as follows: Being collected in the bath-room, they are each marched to a tub, ordered to undress and deposit their clothes, and then walk into the adjoining "rubbing-room;" here they are instructed to rub themselves and each other thoroughly with Sapo viridis, which is in a large pan in the centre of the room. Steam, in moderation, is let into the apartment as they smear and rub themselves with the soap, for the purpose of macerating the epidermis. They rub for twenty minutes, and then return, each getting into his own tub of hot water and soaking for an hour. At the end of this time they are ordered back to the rubbing-room, a jar containing an ointment composed of sulphur, bicarbonate of soda, and fat is substituted for the pan of Sapo viridis, and with this they rub themselves again thoroughly for twenty minutes. This process finished to the satisfaction of the superintendent, the final instructions are given, viz.: to put on their old clothes directly over the unguent, to go home, and return to the hospital in forty-eight hours. Neither are they to take a bath in the mean time, or to rub off the ointment, but bring their old clothes with them,—wear them,—to be fumigated, besides a bundle of clean clothes; they are to sleep alone and have their bedding boiled. With these injunctions, they are dismissed. Upon returning, they receive a bath, and the cure is considered complete. In this way all the scabies patients who apply at the St. Louis are treated: but the question arises, Is this single application of soap and sulphur sufficient to destroy all the acari? Many of the patients apply the remedies carelessly, and in others, where the epidermis is thick, it is not thoroughly penetrated by the ointment; but undoubtedly the majority of cases are cured, for I have seldom seen a scabies patient reapply for treatment with a new crop of eruption. On the other hand, if the treatment be thorough, why is scabies so rife in Paris? and why does not the ratio diminish? It may also be suggested, does not such a rapid and violent rubbing with irritants produce an eczema, and thus the cure of one trouble induce another? In some cases, where the scabies is of a high grade, doubtless a new eczema will be provoked; but in the majority of cases the cure is followed by no serious symptoms, and scabies patients seldom return with eczema. In the wards of the St. Louis the collection of cases is such as can be seen in no other hospital in the world, although, as before stated, the student does not receive sufficient instruction to profit by them. Considering scabies as the commonest of all the skin affections in Paris, eczema (produced by causes not parasitic) may be placed next; and its treatment differs greatly from that of the German school. The employment of the revulsive treatment for eczema, so well known in Germany and used with such grand results, is almost ignored in the St. Louis. In its place we find a treatment of poultices and emollient dressings,—the same that Alibert employed fifty years ago. With this method the cure is slow, months often being required for the cure of a simple case. Taking the treatment of eczema as a stand-point, I would notice the marked difference in the treatment of skin diseases in general as practised in Paris and in Vienna. The French school advocates soothing poultices, bland ointments, and baths for almost all affections; it relies upon internal treatment for the cure, the theory being that the appearances on the skin are simply symptoms of the diathesis, and that the treatment must be directed against the diathesis, and not against the eruption. The German school maintains that the immediate exciting cause of the disease should, if possible, be recognized at once, and a simultaneous endeavor made to remove the appearances on the skin. Whether it be an eczema or psoriasis, a herpetic or arthritic diathesis, the desire is to get rid of the eruption as soon as possible; and any treatment, either external or internal, that will conduce towards this end must surely be the correct one. This same principle prompts the German school to direct its treatment in many cases against disease as it develops externally; for, not being acquainted with specific internal remedies, the attention is given with vigor to the external treatment, making life at least endurable to the patient. Secondary and subsequent forms of syphilis are to be found in great numbers in the wards of the St. Louis, the treatment being similar to that employed at the Midi and Lourcine. Diseases of vegetable parasitic nature abound in Paris, more of these being seen in a week at the St. Louis than in two months in any other hospital. Tinea tonsurans is exceedingly common, and is treated by epilation with the forceps and parasiticides. Tinea favosa is frequently met with, and the same treatment is relied upon, the employment of the "calotte," as formerly practised, being altogether in disuse. Parasitic sycosis due to the presence of the trichophyton is also of very frequent occurrence. Strange as it may appear, this form of sycosis is very rarely found in Vienna, some of the dermatologists of Austria having even been inclined to doubt its existence in Paris. The microscope, however, quickly settles this question, and without the tedium of argument. Within the enclosure of the hospital there is a building, containing perhaps twelve beds, devoted to Elephantiasis græcorum, cases of which are con-

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tinually arriving from the French southern provinces, as Mauritius, etc. The disease has generally made such horrible ravages by the time the cases reach the hospital, that there is but little hope for recovery, or even amelioration.

The baths of the St. Louis deserve the attention of every physician visiting Paris, for they may be considered as the most complete to be found in the world. They occupy a separate building, and are fitted up in style, and even luxury. As you enter the main door, on either side are apartments containing a series of tubs, on one side for the men and on the other for the women. In each apartment are thirty-two iron tubs, lined with white enamel, and furnished with hot and cold water, while a white linen curtain separates one tub from the other. In these tubs simple, sulphur, starch, bran, and other medicated baths are prepared. Further on, in another apartment, are the arrangements for fumigations with mercury, aromatics, etc., and adjoining is the room devoted to the steam and Russian baths. Opposite is the grand douche room, where all manner of hydropathy is employed. Here shower, plunge, and seat baths, with numerous other devices, are found, to suit the demands of all cases. The whole is upon a magnificent scale, everything being introduced that can in any way benefit the patient. The baths for the scabies cure are altogether distinct and removed from this department.

In connection with the St. Louis Hospital is the fine dermatological museum, containing models and preparations of various kinds, besides many delicately-painted portraits of skin diseases, and a large number of chromo-lithographic plates and photographs. The models, made of a secret preparation of wax, moulded and prepared by M. Baretta, of Paris, display most excellent workmanship, and bring the disease to mind with remarkable vividness. Indeed, this is the most complete and beautiful set of models of these affections in the world; and great credit is due the gentlemen who first inaugurated this instructive and valuable department of dermatology. Speaking of the museum, I cannot close without mentioning that Dr. Wigglesworth, of Boston, has recently purchased a complete set of these exquisite models. The medical profession generally should certainly feel gratified to think that at least one such collection has found its way to America.

REVIEWS AND BOOK NOTICES.

A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M.D., etc., and William Pepper, M.D., etc.; Fourth Edition of Meigs on Diseases of Children. Philadelphia, 1870. Lindsay & Blakiston. 8vo. pp. 921.

In this portly volume our readers will not, at first glance, recognize a tried and valued friend which has helped them out of many a scrape, but, amidst a vast amount of new matter, they will often get a kindly nod of greeting from some familiar phrase or well-remembered case. The rapid sale of the three earlier editions of "Meigs on the Diseases of Children" fully attests the popularity of this standard work. Some years have elapsed since the last edition was exhausted, and the demand for a new one was great. The strides which science had in the mean time made called for a recast of the whole work,—a task which no busy practitioner like Dr. Meigs could undertake single-handed. He therefore associated with himself a gentleman whose name betokens painstaking accuracy, thorough research, and crisp analysis; and this happy partnership has resulted in a superb work, printed in closer type than any preceding edition, and yet containing two hundred more pages of matter.

Our task as a reviewer is a gracious one; for there is much to praise and little to blame. Seventeen new articles have been added, and the section on dermatology has been much enlarged, whilst every page has been retouched, and the very latest views on pathology and treatment are presented in the fullest manner. The chapter on croup is a most masterly one. Bacon has said that "truth more certainly emerges from error than from confusion;" but, by closely following the pathology of this protean disease, the authors have extricated, out of an almost hopeless confusion of jarring terms, a clear record of its different phases. With great propriety, Laryngismus stridulus has been taken out of this group and placed among the neuroses, where it belongs. This article, together with those on eclampsia and atrophic infantile paralysis, elicits our admiration; but so, indeed, do all those which treat of the nervous affections of childhood. To our thinking, the chapter on chorea is the best in the book; although we cannot agree with the authors that the choreic phenomena are best explained upon the theory of capillary embolism impairing the nutrition of the sensori-motor ganglia.

The exanthemata have received that attention which their importance and frequency in childhood demand. Every chapter devoted to this subject is excellent; but the one on scarlet fever seems really to exhaust all the knowledge we possess about this formidable disease. We must, however, express surprise at finding in it a lurking half-belief in the prophylactic virtues of belladonna. Do Drs. Meigs and Pepper believe also in the weapon-salve and the philosopher's stone?

A tone of candor pervades this book which gives it weight and character. None but sterling men—certainly no mere bookmakers—would frankly confess that an enlarged experience has shaken their confidence in remedies on which they formerly set undue value. From Greenland's icy mountains to India's coral strand, it takes a deal of grace to renounce one's idols; but our authors have sternly banished mercury from the therapeutics of cholera infantum and diarrhœa, from pulmonary affections, and from a host of other diseases. Bloodletting and antimony have also been dethroned; and as for blisters, they are not used, even in pleurisy. In the name of the coming infant—thanks!

After a careful examination of the volume before us, we are led to the conclusion that it is superior to any of the recent works on the subjects of which it treats. We therefore urge our readers to put away their earlier editions upon the top shelf of their libraries, and *squeeze* into the gap—*if they can*—the edition of 1870.

Report to the Surgeon-General, U. S. Army, on Certain Points connected with the Histology of the Minute Blood-Vessels. By Bvt. Lieut.-Col. J. J. Woodward, Assistant Surgeon U. S. Army. Washington, D. C., 1870. 4to, pp. 8. Accompanied by ten photomicrographs.

These brilliant results of the operations at the Surgeon-General's office are photographs from microscopic preparations made by the aid of the staining solutions of silver nitrate—first suggested by Von Recklinghausen, of Berlin, in 1860,—usually of the proportion of one part of the crystalline silver nitrate to four hundred of water, though the result is not altered by a considerable variation on either side, provided the solution is well washed off before the tissue is exposed to the light.

These preparations are the first of which any published description has appeared in this country, and they exhibit a success which is deserving the highest gratulation. The photographs illustrate, first, the endothelium of the minute blood-vessels,—arterioles, capillaries, and venous radicles,—and prove conclusively its existence; second, they show, also, the so-called stomata of Cohnheim, or spaces between the epithelial cells through which the leucocytes are supposed to seek egress. Without desiring to be too critical, we cannot but feel that the term *intermediate spaces* of Stricker, as being at once more correct and more consistent with a scientific nomenclature, would be the better employed.

We are somewhat at a loss to determine the means by which Dr. Woodward would distinguish capillaries from

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small arteries. Ordinarily it is stated that the passage of a capillary into an arteriole is by the scattered addition of transverse nuclei, though it is well known, also, that certain small veins, as well as arteries, are destitute of muscular fibre-cells. These are wanting in many of the vessels described as small arteries. Does he determine the question by relative size alone? The endothelial cells of small arteries are described and depicted as being more elongated than those of veins.

These photographs have the further merit of showing plainly what they are intended to represent, with perhaps a single exception,—that showing the white blood corpuscles exhibiting amœboid movements in the external coat of a small vein. These cells present the appearance of granular bodies of various sizes and shapes imbedded in a fibrous stroma, which may readily be interpreted as white blood corpuscles or protoplasmic matter; but to conceive them as the active seat of amœboid movements, or as insinuating themselves through the wall of a blood-vessel, appears impossible, at least to one not having seen the process under the microscope. The difficulties of presenting such conception by photograph we deem insurmountable. It has been our good fortune to see this photograph projected upon screen by the gas microscope, with similar ill success, so far as giving the proper conception is concerned. But this does not detract from the truth of the observation, which has ample confirmation; and we have no doubt that the original specimen, by the aid of transitional focusing, satisfactorily show these white blood corpuscles in the act of wandering through the coats of the blood-vessels. Admitting, as his own observations amply show, that the passage of the white blood corpuscles through the vascular walls is amply proved, we are glad to read the concluding paragraph of Dr. Woodward, in answer to an interrogatory as to the correctness of the theory of inflammation which Cohnheim builds upon these facts and his corneal studies: "I find the evidence insufficient, as yet, to afford satisfactory answers to these questions. The observations made by Cohnheim on the connective tissue corpuscles of the tongue of the frog are not conclusive in themselves, and Stricker's studies on the same subject show the necessity of further labor in this direction before the possible multiplication of these elements in inflammation can be denied. As to the doctrine that the white corpuscles, after their escape from the blood-vessels, are transformed into the elements of normal or pathological tissues, the facts hitherto brought forward can scarcely be said to do more than raise it to the rank of an ingenious hypothesis. The actual steps of this transformation, if it does occur, have yet to be observed."

It is finally stated that the preparations referred to in this circular can be examined by any professional microscopist who may visit the Army Medical Museum at Washington. But is this sufficient? Would not the objects of the museum be better accomplished, and the cause of medical education further aided, by the distribution of these specimens throughout the country by sale at a reasonable price? And where specimens are prepared in the almost wholesale manner in which they are at the Army Medical Museum, with facilities unequalled, perhaps, throughout the world, such a distribution would be quite possible. Many a medical teacher could thus afford to purchase a few specimens and study them at his leisure, when he could not assume the expense of a trip to Washington and of a sojourn there sufficiently long for purposes of study.

GLEANINGS FROM OUR EXCHANGES.

Poisoning by Dyeing Aniline Black. By A. Dolfus. (*Chemical News*, Oct. 14, 1870; *Polytechnisches Journal, von Dingler*, first Number, for Sept. 1870.)—The author states that while two of his workmen were engaged in dyeing cotton yarn in a hot mixture consisting of aniline, hydrochloric and tartaric acids, copper, chlorate of potassa, and water, they were suddenly seized with severe headache, difficult respiration, tremor, and languor, becoming cold and weak. Medicinal treatment restored them to health. The symptoms are difficult to account for, except by assuming them to be due to the volatilization of chloride of arsenic, which may have been formed if, through the carelessness of the manufacturer of the aniline, arsenic was left in it; unless, indeed, aniline itself is capable of exerting a poisonous influence.

Antiseptic Treatment of Contagion as Illustrative of the Germ Theory of Disease. By William Hope, V.C. Paper read before the British Association, Liverpool. (*Chemical News*, Oct. 21, 1870.)—By the "germ theory of disease" the author means "the process by which an infectious disease, having once originated, is disseminated and communicated from one subject to another;" but he does not apply it in any way to the *origin* of such diseases. On the contrary, he has "the greatest difficulty possible in believing that the germs of Asiatic cholera existed in a passive state from the creation of the world down to 1817," and that they were then "called into existence by getting into the congenial climate of a Hindoo stomach." In 1867 he had the opportunity of testing thorough disinfection, by means of carbolic acid and slaking lime, as a therapeutic agent in the treatment of rinderpest, which had attacked a large number of valuable cows. From his remarkable success, not only in preventing the spread of the disorder, but also in curing the affected animals, he was led, a year later, to try the same means in the treatment of cases of scarlatina in his own family. Carbolic acid was administered internally, and the air of the sick-room was impregnated with it. The cases did perfectly well; but, in spite of the disinfectants, the disorder spread to others among the children. Nevertheless, Mr. Hope thinks that, in all probability, disinfectants kill germs, that there is reason to believe that rinderpest, at any rate, was checked by disinfectants, and that therefore it is fair to imagine that disease is propagated by germs.

Excision of the Tongue.—Prof. G. E. Fenwick, of McGill University (*Canada Medical Journal*, vol. vii. No. 1), reports the case of a male, fifty-nine years of age, suffering from epithelioma of the tongue and of the corresponding side of the floor of the mouth, but without lymphatic involvement, in which he removed the affected structures by carrying an incision through the lower lip down to the hyoid bone, and dividing the jaw at the symphysis with a Hey's saw. The tongue being then drawn upwards, he cut through the attachments of all of the central muscles of the right side of the jaw-bone, and detached the mucous membrane of the floor of the mouth on the corresponding side, thereby laying bare the mylo-hyoid muscle. The same was done on the left side, excepting that the origin of the genio-hyoid muscle was left, and during this step of the operation the lingual artery was divided, but it was temporarily compressed. The chain of the écraseur was next passed fairly beneath the diseased mass and pressed back close to the epiglottis, when the organ was slowly crushed off. No hemorrhage of consequence followed, and the procedure was completed by wiring together the opposed surfaces of the lower jaw, and approximating the soft parts by eight points of the wire suture. The patient recovered without an untoward symptom, and nearly eight months after the operation the stump of the tongue was entirely healed; there was firm union at the symphysis; he could masticate freely; his health was robust, and his speech was quite intelligible,—so much so, indeed, that he was able to pronounce words that before were spoken with difficulty.

In his remarks upon excision of the tongue, Professor Fenwick says, "I have noticed in several of the cases that have been operated on in the London hospitals, when the écraseur was used, some difficulty was experienced in consequence of hemorrhage following the severance of the diseased mass. In the three cases reported by me, there has been no difficulty of this nature. This I account for from the fact that, in my cases, the vessels of the part were divided by the écraseur transversely, as my assistant on each occasion drew the organ forcibly out of the mouth, directing it upwards. In Regnoli's operation, which I regard as unsurgical, the tongue is drawn downwards, so that the vessels are crushed diagonally, and cannot retract as effectually within their sheath as if otherwise treated. Another objection to Regnoli's method is the severance of all the muscular attachments of the elevators of the os hyoides, and also the muscles antagonistic to the closure of the epiglottis, so that in one instance on record the surgeon had to pass a ligature through the epiglottis to prevent his

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patient becoming asphyxiated. In a case reported by Mr. Erichsen, where he performed Regnoli's operation, the patient had to be fed with a tube passed into the stomach, as there was perfect inability to swallow, – a result which will not occur if the attachments of the muscles which raise the os hyoides in the act of swallowing are preserved. It appears to me that it is of vital importance to preserve the attachment of these muscles; and, to avoid the chance of troublesome, if not fatal, hemorrhage, the vessels, when the écraseur is used, should be divided transversely."

EFFECTS OF COXALGIA ON THE GROWTH OF THE LIMB.—Dr. E. Boeckel (*Archives de Physiol.*, No. 4, 1870) records some very interesting pathological observations on the ulterior effects of coxalgia on the subsequent growth of the limb. In 1835, Sédillot demonstrated the atrophy and malformation of the pelvis resulting from congenital luxations. In 1862, Humphry demonstrated, in eighteen cases of early resection of the knee, that the limb was shortened more or less in nearly every case. He ascribed it to defective growth at the epiphysal cartilage. Dr. Boeckel has investigated thirteen cases of coxalgia, nine on the body and four on the skeleton, at intervals of from four to fifty-four years after the disease was cured. Besides the deformities of the pelvis, he found the femurs shortened from 1 to 5 centimetres (⅜ inch to 2 inches), the tibias shortened from 1 to 3 centimetres (⅛ inch to 1⅛ inches), the feet from 1 to 3 centimetres, and the girth of the calves of the legs from 1 to 7 centimetres; showing that such a disease has a marked effect over the entire bony and muscular development of the limb affected. The deformities of the pelvis are important in an obstetrical point of view.

FRAGMENT OF KNIFE-BLADE LODGED IN THE CHEST FOR TWELVE YEARS, AND FINALLY COUGHED UP.—Dr. J. F. Snyder reports (*Chicago Med. Ex.*, July, 1870) the case of a man, aged 60, who was wounded twelve years previously by a stab in the back about the point of the shoulder-blade. The man had no idea that the fragment of the knife was imbedded there. He suffered from cough only at the time of the expulsion of the foreign body, when it continued for four weeks. The fragment of steel was corroded and pitted by oxidation, and was 1¼ × ½ inch.

CONGENITAL ABSENCE OF ONE LUNG.—Dr. W. Dickey records (*Cin. Lancet and Observer*, July, 1870) the case of Miss B., aged 16, who fell sick of consumption. "Percussion elicited a dull sound over the entire right lung; right side unusually resonant; . . . strong cardiac impulses were heard on the right side. Autopsy twelve hours after death. On opening the thorax, we found the left lung studded with tubercles, . . . somewhat larger than usual, but consisting of two lobes as ordinary. No lung in the right side,—not even a rudiment at the bifurcation. Between the largest of pleura the space was clean and beautiful. No lung had ever existed. Heart in the mediastinal space, but in the right side corresponding to a natural situation in the left. Its walls were thickened, and cavities somewhat enlarged."

[The report of this very unusual case is, unfortunately, very meagre and unsatisfactory, whether as to exactness of observation before death or clearness of description after death. The post-mortem was necessarily very hastily made; but the report at least could have been written at leisure.]

HYPERTROPHY OF MUSCULAR WALLS OF SMALL ARTERIES IN CHRONIC BRIGHT'S DISEASE.—Dr. Geo. Johnson (*Brit. Med. Jour.*, April 16, 1870) gives an interesting résumé of our knowledge of the anatomy and the pathology of the changes in the vascular system in chronic Bright's disease. More than thirty years ago, in the 1st vol. of Guy's Hospital Reports, Dr. Bright pointed out the hypertrophy of the left ventricle, and suggested that "the altered quality of blood might so affect the minute and capillary system as to render greater action necessary to force the blood through the distant subdivisions of the vascular system." Twenty years ago, in the 33d vol. Med.-Chir. Trans., Dr. J. described the hypertrophy of the renal arterioles, and suggested, as a cause, their effort to help on the blood through the compressed vessels in front. In the 51st vol. Med.-Chir. Trans. will be found his corrected views, both as to facts and causes. He argues that the cause of this hypertrophy of the renal vessels is the constant reflex muscular efforts excited by the abnormal quality of the blood; and it occurred to him that the arterioles everywhere should suffer in like manner, as the same vitiated blood circulated everywhere. On looking at the arterioles of the pia mater, skin, intestines, muscles, etc., he found it almost as well marked. There was no structural change other than hypertrophy. This hypertrophy in the minute arteries would cause obstruction to the circulation, and this, in its turn, would bring cardiac hypertrophy, exactly according to the shrewd guess of Dr. Bright himself.

These facts explain—1. The cardiac hypertrophy; 2. The full, hard radial pulse and its sphygmogram; 3. The excessive dryness of the skin, and the difficulty of inducing diaphoresis; 4. The tendency to dropsy by the impeded circulation; 5. The not infrequent cerebral hemorrhage.

ACTION OF CARBONIC ACID ON THE BLOOD, BRONCHIAL SECRETIONS, ETC.—Of the numerous papers presented to the British Association at its recent meeting (Sept. 14–21), none was more interesting than that of Dr. B. W. Richardson, embodying the results of physiological experiments with carbonic acid (*London Lancet*, Sept. 24, p. 438). When the serum of the blood was treated with this acid under pressure and gentle warmth, the colloidal part was separated; but when defibrinated blood was acted upon, there was no direct separation, and the blood-corpuscles seemed for a time to engage the gas by condensation of it. But blood containing fibrin, and holding fluid by tribasic phosphate of soda, was at once coagulated by the acid. The bronchial secretion was thickened by carbonic acid, and a tenacious fluid obtained, resembling the secretion in asthma and bronchitis, while secretions on serous surfaces were thickened and rendered adhesive.

These experiments are valuable on account of their relation to different morbid conditions. When the temperature of the body is raised, and the production of carbonic acid is excessive, the blood on the right side of the heart has its fibrin often precipitated. In many other cases, fibrinous or albuminous exuded fluids are solidified in presence of the acid, as is the case in croup. Dr. Richardson also referred to the rapidity with which blood charged with carbonic acid absorbed oxygen when exposed to that gas, and he held that carbonic acid in the venous blood was as essential to the process of respiration as was oxygen in the pulmonary organs.

RELATIVE TEMPERATURE OF THE RIGHT AND LEFT SIDES OF THE TRUNK.—Observations have been made by Edward T. Blake, M.B., etc. (*Med. Times and Gaz.*, October 8, 1870, p. 420), to corroborate, if possible, the views expressed by him in a letter written to the same journal last June. From experiments on himself and others after exercise, he arrived at the following results: 1. The temperature of the two sides of the trunk under usual circumstances—that is, in health and at rest, in a temperate climate—is equal. 2. Under certain conditions, as exercise, the temperature of the left side of the trunk may exceed that of the right. 3. The excess during exertion, in a cool atmosphere, averages half a degree Fahr. 4. The excess reached its maximum—about one degree Fahr. —during exertion in a powerful sun.

ACTION OF THE SYMPATHETIC ON THE URINARY SECRETION.—M. Peyrani has recently experimented with dogs, cats, and rabbits, in some of which he divided the nerve before applying the galvanic current, and in others he left the nerve entire. The results arrived at are as follows:

1. The quantity of urine and urea increases in proportion to the force of the voltaic current.

2. When currents of the same intensity are employed, the current of induction produces a much greater increase in the quantity of urine and urea than the constant current.

3. If the sympathetic is merely cut, and not acted upon galvanically, the quantity of urine and urea is at the minimum.

4. When galvanism is applied to the peripheric end of the nerve, already cut in the neck, the quantity of urine and urea descends much below the normal standard, although the figures are much below those obtained after the action of the current upon the previously uncut nerve.

POISONING BY YEW BERRIES.—In the *Medical Times and Gazette*, Dr. A. H. Newth reports a post-mortem made by himself upon the body of a lunatic, who was found dead after having eaten a quantity of yew berries. The points worthy of notice in this are as follows: the fluidity of the blood,

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which was "of a peculiar dirty plum color, very limpid, and staining readily;" the stomach and bowels reddened, inflamed, softened, but not ulcerated; the mucous membrane of the lower end of ileum (where numbers of berries were found) was furnished with numerous sudaminoid vesicles, of the size of a large millet-seed, and containing granular corpuscles in a whitish fluid; the pancreas congested; the spleen of a peculiar, jelly-like feel, breaking down readily on pressure, and appearing "congested and watery" on section; the liver and kidneys congested; the brain-membranes passively congested, the substance rather watery, without numerous puncta sanguinea; the subarachnoid space with considerable effusion; fornix, crura, and optic thalami much softened.

We take the following from the *London Pharmaceutical Journal*: "*L'Imparziale*, of Florence, mentions the case of a girl who took decoction of yew berries to bring on her catamenia. She repeated the dose every morning for three days, but on the fourth took an increased dose of eight ounces. Severe vomiting ensued; a medical man was called in, and the vomiting was encouraged by the use of tepid water. In spite of every effort, however, the patient died delirious eight hours after taking the last dose. Nothing of importance was revealed by the post-mortem."

GELSEMIUM.—The conclusions arrived at by Dr. Roberts Bartholow, in a paper in *The Practitioner* for October, 1870, are, that in frogs gelsemium acts upon the nerve-centres, paralyzing first the sensory ganglia, and afterwards the motor; that it does not affect muscular irritability, nor the peripheral nerve-fibres. In warm-blooded animals the same effects were observed, save only that the motor fibres were the first affected. There is also produced a depression of temperature, 30° F. in the case of a pigeon, 40° F. in that of a kitten. The doctor also states that repeated trials have convinced him that there is no antagonism between it and strychnia, the latter drug rapidly tetanizing warm-blooded animals already profoundly affected by gelsemium.

HYDRATE CHLORIDE OF ALUMINUM.—According to the *Chemical News*, this substance, under the name of "chloralum," is largely coming into use as an antiseptic. It is said to be very powerful as such, and at the same time non-poisonous and odorless.

MISCELLANY.

THE curators of the Edinburgh University have brought a storm upon their heads by their appointment of Dr. Alexander R. Simpson to the professorship of midwifery, vacated by the death of his uncle, Sir James Y. Simpson. Two gentlemen of great reputation and undoubted ability—Drs. J. Matthews Duncan and Alexander Keiller—were also nominated for the place; but Dr. A. R. Simpson's relation to the former incumbent seemed, in the eyes of the curators, to outweigh all other claims.

Dr. Simpson's position is not an enviable one. He knows that the feeling of the mass of the profession in Great Britain is against such palpable nepotism; indeed, he has actually been called upon to resign the chair, in a written request signed by many physicians and students. On the other hand, Dr. Duncan has been urged to deliver a six months' course of lectures on obstetrics, in a letter already backed by nearly three hundred names.

AN ingenious German is said to have invented a form of turbine wheel adapted for use as a motor-power for the sewing-machine. According to the account in one of the daily papers, it occupies a very small space, and can be attached to any hydrant or water-pipe, makes no noise, and scatters no water. The connection with the machine is effected by means of belting.

The general adoption of such a contrivance as this would set at rest the very common idea that the use of the sewing-machine is injurious to health. We are not aware of any well-authenticated cases of such injury, however; and the operators are so numerous that any disorder affecting them as a class could hardly fail to attract attention.

THE following grim statement appears in the London *Medical Press and Circular* for July 13, 1870:

"BLACK DEATH IN GEORGIA.—One hundred and fifteen persons died with cerebro-spinal meningitis, in Coffee county, Georgia, in the month of March. Malignant epidemics of this disease are prevailing, besides, in parts of Mississippi, Florida, South Carolina, and Pennsylvania."

Perhaps this is true,—although we had not heard of it. But why call the disease "black death"?

AMONG the curious differences which exist between this country and Great Britain in regard to the way of doing things, we note that here a railroad-company generally compromises with persons who bring suit against it for injuries sustained, unless the damages demanded are excessive or the claim is obviously trumped up. On the other hand, in England, at least, the cases of the kind which come before the courts are numerous. We find it stated that a surgeon who made it his business to hunt out and work up such complaints was compelled to abscond.

TWO new tests for determining whether death is real or apparent have recently been proposed. One is by the application of calabar bean to the eye, upon which, unless life is extinct, the iris will respond to the stimulus and the pupil will become contracted. The other is by the insertion of a bright steel needle beneath the skin: if the tissues are living, the needle will in a short time become rusted; but if death has occurred, it will retain its polish, even after half an hour. Nothing, surely, could be easier than to determine the value of either of these tests, and nothing simpler than to apply them in any given case of doubt, if either should be proved to be reliable.

AN ATTACK UPON ETHER.—A late homœopathic writer, after describing a case of death from chloroform, urges that very great harm has been done by ether also. He thinks that no account has been taken of the lasting injury done to the mind and to the nervous system by the latter agent. This is entirely in accord with a popular prejudice; but, if there were any foundation for it, it could not have escaped notice, considering the vast experience of the profession in the use of this anæsthetic during the last twenty-three years.

CREMATION.—From time to time, a return to the ancient custom of burning the dead, instead of burying them, has found advocates. During the present Franco-Prussian war a number of journals have urged it as a matter of economical and sanitary importance. No government, however, has as yet undertaken to attempt the change; and this is the only way in which it could be effected. Perhaps the new impetus given to the use of earth as a disinfectant, within the last few years, makes it less probable than ever that the practice of burial will be abandoned.

"DR." NEWTON, the "miraculous cure" quack, who has repeatedly attempted his impostures in this and other American cities, was not long ago mobbed in a Baptist church in London and compelled to fly for his life. The public will be gulled by such a man; but they are enraged if he lets them detect his knavery.

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In the *Medical Press and Circular* of July 6, it is stated that a physician was recently tried in London for an alleged rape (and, from the obscurely-worded account, it would seem that he was convicted and sentenced to transportation), his actual offence having been merely the introduction of a speculum. The mother of the girl is said to have been in the adjoining room at the time; and it is difficult to understand how a case could be made out, since if she saw the attempt she could have interfered, and if she did not she could not have testified to it. The girl herself was under the influence of chloroform.

The Siamese twins are in trouble. One of them has had an attack of paralysis; and, bad as this is for him, it really seems as if it must be worse for the other. It would be strange indeed if death should compel the sundering of the nearly fifty-years-old bond between the pair,—if some country doctor should be called upon to perform the operation from which the most eminent surgeons in the world have shrunk.

Hippophagy.—Horse-meat is being practically tested as an article of diet by the Parisians. The experiment, being a compulsory one, will doubtless be carried on with less zest than by the society of a few years since. This is perhaps, however, the least of the hardships to which the *gourmets* of the gay city are subjected.

The *Medical Times and Gazette* gives the following statement, the heading of which is very applicable to us in this longitude:

"An Example to Us.—Dr. Von Schmidt has lately been tried before the correctional tribunal at Paris, on the double charge of practising without a diploma and selling secret remedies. He professed to be able to cure cancer, and obtained some temporary notoriety, in consequence of being called to attend Count de Goltz, the Prussian ambassador. His secret remedies turned out, on examination, to be turpentine, spermaceti, and aloes, to which he had given high-sounding and fantastic names. He was found guilty on both charges, and sentenced to two fines, one of fifty francs and one of one thousand francs. He had been convicted previously at Brussels, but had escaped the punishment by flight."

A physician in Portland, Me., having been sued for malpractice in a case where he performed an operation upon the hand, obtained a verdict upon the somewhat unsatisfactory ground "that the ether administered to the patient affected him (the physician) so that he was unconscious of what he did."

An exchange states that in Rome Jews are not allowed to practise pharmacy at all, and medicine only upon people of their own faith.

Mortality of Philadelphia.—The following statements are condensed from the Health Office Reports:

	For the week ending Nov. 12.	Nov. 19.
Diseases of the Brain and Nervous System	38	41
Diseases of the Organs of Circulation and Respiration	105	96
Diseases of the Abdominal Organs	26	24
Zymotic Diseases	9	14
Constitutional Diseases	10	8
Casualties	5	10
Stillborn	17	7
Unclassified	45	45
Unknown	1	1
Adults	153	140
Minors	103	106
Totals	256	246

LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 4, 1870, TO NOVEMBER 17, 1870, INCLUSIVE.

Wirtz, H. R., Surgeon.—By S. O. 25, Headquarters Department of Arizona, Oct. 13, 1870, to proceed to *Drum Barracks*, California, and await further orders from these headquarters.

Webster, Warren, Surgeon.—By S. O. 218, Headquarters Department of the East, Nov. 4, 1870, to proceed without delay to *Fort Warren*, Mass., and relieve Assistant Surgeon J. H. Kinsman from duty as Post Surgeon.

Happersett, J. C. G., Assistant Surgeon.—By S. O. 231, Headquarters Department of the East, Nov. 16, 1870, the leave of absence granted Assistant Surgeon Happersett in S. O. 123, Headquarters Fort Washington, Md., is extended *twenty days* on surgeon's certificate of disability.

Whitehead, W. E., Assistant Surgeon.—By S. O. 218, Headquarters Department of the East, Nov. 4, 1870, relieved from duty at Fort Columbus, N. Y. H., and to proceed *at once* to *David's Island*, N.Y.H., and report to the commanding officer of that post for duty.

Cowes, Elliott, Assistant Surgeon.—By S. O. 218, Headquarters Department of the East, Nov. 4, 1870, upon being relieved at Fort Macon, N.C., to proceed to *Fort McHenry*, Md., and report to the commanding officer and Post Surgeon.

Kinsman, J. H., Assistant Surgeon.—By S. O. 218, Headquarters Department of the East, Nov. 4, 1870, upon being relieved as Post Surgeon, by Surgeon Warren Webster, at Fort Warren, Mass., to proceed to comply with par. 2, S. O. 176 C.S., from these headquarters.

Kinsman, J. H., Assistant Surgeon.—By S. O. 227, Headquarters Department of the East, Nov. 12, 1870, granted permission to delay, for *twenty days*, proceeding to Fort Johnson, N.C., when relieved by Surgeon Warren Webster.

Caldwell, D. G, Assistant Surgeon.—By S. O. 241, Headquarters Department of the South, Nov. 5, 1870, having reported at these headquarters, in compliance with S. O. 111, Headquarters of the Army, A. G. O., C.S., to report without delay to the commanding officer Post of Chattanooga, Tenn., for duty as Post Surgeon, relieving Acting Assistant Surgeon J. H. Van Deman.

Bentley, Edwin, Assistant Surgeon.—By S. O. 171, Headquarters Department of California, Nov. 2, 1870, granted leave of absence for *thirty days*, with permission to apply for an extension of thirty days.

Bartholf, J. H., Assistant Surgeon.—By S.O. 244, par. 1, Headquarters Department of the South, Nov. 9, 1870, to proceed without delay to *Lebanon*, Ky, and report to the commanding officer of that post for temporary duty as Post Surgeon, relieving Acting Assistant Surgeon W. H. Hopper, U. S. Army.

Occlusion of the Vagina. By Dr. Mallory (*Rich. and Louis. Journal*) and Dr. Halbertsma (*Central-Blatt*, March, 1870).—Dr. Mallory reports a case of occlusion of the vagina, with prolonged retention of the catamenia, occurring in a woman aged 30, two years after her last confinement. A puncture was made into the tumor, which was felt in the vagina above the obstruction, and a black, tarry fluid escaped, followed by perimetritis and the formation of an iliac abscess. Two years afterwards the vagina was again occluded, and a second operation became necessary, which was again followed by perimetritis; but subsequently complete recovery took place.

Halbertsma explains the bad effects which so often follow an operation of this character by the fact that, when the uterus is rapidly emptied of the contained menstrual fluid, the Fallopian tubes must be pulled upon and ruptured if, as is generally the case, adhesions exist; while, if they are still free, they are thrown into contraction with the uterus, and expel their contents into the abdominal cavity. Dr. H. makes only a small opening, and permits the retained fluid to escape drop by drop, and reports a case successfully treated in this way.

Tubercular Meningitis in the Spinal Cord.—Dr. Henry Lionville (*Archiv. de Phys.*, No. 4, 1870) records the results of his observations in cases of tubercular meningitis, so called, in which he draws attention to the fact that the disease is not limited usually to the cerebral meninges alone, but extends to those of the spine as well. "Everything leads us to believe that the examinations, and not the disease, were limited to these special regions." He found granulations of the same character as described by Cornil and Bastian specially marked in the posterior median fissure of the cord, and surrounding the vessels just as in the brain. This explains the motor and sensory troubles, the rigidity of the neck and trunk, the tetanic attacks, the functional paralysis, etc., much better than if it were limited to the brain alone.

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THURSDAY, DECEMBER 15, 1870.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF LATENT PLEURISY, AND ON A CASE OF LATENT VALVULAR DISEASE OF THE HEART.

BY ALFRED STILLÉ, M.D.,

Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital, etc.

(Concluded.)

THE other example of latent disease which I propose to analyze is furnished by a case of organic or structural disease of the heart.

CASE II.—M. R. is about 40 years old, by birth a German, unmarried, a laborer, of temperate habits, and, until his present illness, supposed himself a healthy man. Four weeks ago he fell into a cellar and fractured his right clavicle; but the injury received no appropriate treatment. A week after the accident, he observed that his right foot was swollen, and within a few days the swelling invaded the opposite leg, the upper limbs, and the trunk; but the face is stated not to have been affected, or but slightly so. He was admitted into the surgical ward on February 7, and three days afterwards (yesterday) was transferred to the medical department. The feet, legs, scrotum, abdomen, and right hand are now tumid, and the skin pits when pressed. The external jugular veins on both sides are much distended, and pulsate synchronously with the radial pulse and the apex-beat of the heart. Around the right clavicle, which is fractured and pretty firmly consolidated by a large mass of callus, the skin is greatly ecchymosed. *Percussion* over both lungs anteriorly gives a tolerably clear resonance; but behind there is dulness over nearly the whole of the right and the lower part of the left lung, the upper boundary-line of the dulness varying with the position of the patient. On *auscultation*, exaggerated respiration is heard over the upper portion of the left lung, in front and behind, while the respiratory murmur of the lower part is very feeble. On the right side the respiration is everywhere feeble, and is more or less associated with subcrepitus, and at the root of the lung bronchial breathing and voice are heard. The sounds of the *heart* are audible within a larger area than natural, and its mass, as indicated by percussion, is unusually great. At and beyond the apex of the heart a loud, rough double murmur takes the place of the first sound; and at the right edge of the sternum, near its lower part, a systolic murmur similar in time and quality, but of a very different pitch, is audible. The pulse is 96, soft, not irregular, although somewhat unequal. The liver seems to be enlarged; it extends nearly an inch and a half below the base of the chest. The cough is troublesome, and the abundant sputa consist either of clear blood or of frothy and bloody mucus. The urine is acid and albuminous, and contains tube-casts. Enough of the secretion could not be obtained to determine its specific gravity.

If anything is evident in this case, it is the dropsy, and the heart-lesions upon which the dropsy ultimately depends. The valvular lesions are abundantly distinct, but of their origin we know nothing; their commencement and their progress were alike latent; for the patient is very positive that before the accident which has been alluded to in the history of the case he had suffered from no sickness whatever, and we know with absolute certainty that such lesions as the physical signs and the rational symptoms indicate could not have arisen since the fall which the patient met with.

The phenomena which present themselves are essentially these: as symptoms, general anasarca, effusion into the peritoneal and both pleural cavities, bloody expectoration, and albuminous urine, and, probably, enlargement of the liver; as lesions, deficiency of the tricuspid and mitral valves, and, probably, contraction of the mitral orifice of the heart. In what order did these phenomena arise, and what is their mechanism? To find your way through a labyrinth, a clue is necessary; and the proper mode of using the clue is to seize its end and follow it to its beginning. But here we can do neither: the ultimate termination is in the darkness of the future, and the commencement is equally hidden in the obscure past. Let us, then, see whither we are guided by the phenomena that are actually before us.

The first medical fact which we can perceive in the case is the injury which was occasioned by a fall about a month ago. The most striking consequence of this fall was a very bad fracture of the right clavicle, with an extensive bruising of the adjacent integuments. A week afterwards dropsy began in the right foot, and soon involved the whole body. What connection had the fall and its immediate consequences with the dropsy? The mere mechanical injury could not have produced such an effect. But the circumstances under which the injury was received may lend us some light. The man fell into a cellar,—a cold and damp place at any season, but especially so in midwinter. How long he lay there we are not informed; but it is perfectly intelligible that if he did catch cold in that place, so as to bring on a congestion of the lung or a pneumonia, the phenomena of these affections were very likely to be masked by the more evident and painful ones belonging to the bruised chest and broken clavicle. That the right lung is more or less solidified, the physical signs demonstrate; and that it is engorged, the bloody expectoration proves. The facts and the proposed explanation of them perfectly agree; and provisionally the condition of the right lung may be attributed to cold acting upon the patient when he was exhausted by his severe injury.

But, as you have seen, the most striking feature of the case is dropsy,—general dropsy,—and with it, on one hand, obstructive valvular disease of the heart; on another, albuminous urine; and, on still another, apparent enlargement of the liver. Is there any natural relation of interdependence among these several morbid elements? Is it probable that the obstruction of the heart, which has all the characters which belong to heart-lesions of long standing and slow development, could have been occasioned by the fall and the fracture which was its consequence? To believe so would violate all the probabilities which grow out of a fair interpretation of physical signs and the laws of morbid anatomy. On the other hand, it is much more probable that these evident heart-lesions *had existed for a long time, although the patient was not conscious of any suffering from them;* because it is of every day's experience that serious organic alterations of the heart are discovered in persons who consult us for quite other affections, and who have no suspicion of suffering from heart-disease. The reason of their unconsciousness is simply this,—that the heart-lesions, although so palpable upon physical examination, are of such a nature as to compensate one another and prevent those obstructions of the circulation which occasion palpitation, difficulty of breathing, and dropsy, which are the most significant evidences of organic disease of the heart.

Now, in order that such heart-lesions should occasion no symptoms, it is essential that the communication between the two sides of the heart through the pulmonary circulation should be free. In our patient's case it probably was so until the occurrence of his accident, at which time, as we have supposed, he must also have got cold, for we found him suffering from engorgement of the right lung. Immediately upon this occurrence, the balance between the cardiac, pulmonary, and systemic circulations was destroyed, the venous system was

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engorged, the sputa became mixed with blood, general dropsy ensued by the percolation of the water of the blood through the veins, the kidneys became congested and the urine albuminous, and the liver and the portal veins distended. The engorgement of the systemic veins is illustrated not only by the dropsy, but also, and still more distinctly, by the blueness or cyanotic color of the feet, the thighs, and other parts, which is in this case, as in all others, a proof that the venous radicles are so much dilated that the color of their contained blood usurps the place of the arterial tint which belongs to the healthy skin. Another phenomenon of an analogous nature is the persistent ecchymosis around the seat of injury. You observe that, although the accident which occasioned this discoloration occurred four weeks ago, the black and blue and yellow colors are still very distinct; and this unusual persistence can, I think, be explained only by the venous stagnation, which hinders, of course, the absorption of the effused blood.

Observe, now, that the integuments at the root and on the sides of the neck rise and fall with the pulsations of the heart, and that as they rise the veins become distended, and as they subside the veins collapse. In one word, these veins pulsate. You know that they communicate, through the vena cava superior, with the right auricle of the heart, and that, in the healthy condition of this organ, every systole of its ventricles would drive the blood back into the auricles and into the veins behind them, were it not for the interference of the auriculo-ventricular valves. Therefore, as it is evident that the blood does regurgitate, at every contraction of the heart, from the right ventricle into the veins, we must infer that the tricuspid valve is deficient. But this is not all. When we auscult the heart at the lower end of the sternum, and even to the right of that bone, a murmur is very distinctly heard, synchronously with the swelling of the veins in the neck and also with the apex-beat. The only mechanism to which it can be attributed is the backward rush of the blood through the tricuspid orifice, and probably over a surface that is rough, or through some narrow channel in the insufficient valve. As the murmur is soft, the latter explanation is probably the correct one; to which reason may be added that the irregularities of surface which generate harsh murmurs rarely occur upon the right side of the heart. On ausculting, now, near the left nipple, we hear another murmur. It is different in tone from the first, being as harsh as the first was soft, and it differs from the latter, also, in being double, while that is single. If we pass the stethoscope slowly from the left nipple towards the right edge of the sternum, and *vice versa*, we at once learn that at these two points the murmurs have respectively a maximum intensity, and that as we recede from the one point and approach the other the quality of either sound grows less distinct, and both, finally, are merged into one, which has not the peculiar tone of either. Thus it is evident that the two originate at different points,—the one in the tricuspid, the other in the mitral orifice. Moreover, as the former is soft and the latter is harsh, we may conclude that the harshness of the latter is due to some hardness and irregularity of the mitral valve or of the edge of its orifice. But the mitral murmur is also a double one, both systolic and diastolic; it is composed of two parts, a longer and harsher, and a shorter and feebler sound. The first is synchronous with the apex-impulse, and is therefore systolic, or produced by the contraction of the ventricle forcing the blood back into the left auricle; the other is diastolic, and is produced by the contraction of the auricle forcing the blood into the ventricle through a contracted and roughened aperture. The one is loud, because it is produced by the strong ventricle; the other is feeble, because it is due to the relatively feeble auricle. On listening to the basic sounds of the heart, the aortic and pulmonary second sounds, I find that they are natural, at least in quality, but very feeble. Their feebleness is due to the abnormally slight tension of the two great vessels, occasioned by the defective action of the auriculo-ventricular valves on both sides of the heart. In other words, at each systole of the heart they receive less blood than is their due, and consequently their semilunar valves are thrown together with a diminished force.

Such, then, are the elements of the mechanical disorder of our patient's heart: deficiency of the tricuspid, deficiency and obstruction of the mitral orifice or valve. In other words, he is deprived of at least one-half of the protective agency of the heart's valves. Their purpose is, among other things, to prevent the lungs from being oppressed by an accumulation of blood in them; but here the blood cannot escape freely from the lungs into the left ventricle, because the mitral orifice is contracted, and because its current, at every systole of the heart, is met by the regurgitant stream which is propelled from the left ventricle into the auricle of the same side. Thus the lungs would be soon and fatally engorged with blood, if the current through them had not some way of escape, which to the patient becomes a door of safety. This, in the present and in many similar cases, has been provided for by a dilatation of the right side of the heart to such an extent that the tricuspid valve no longer closes its orifice completely, and the blood returns from it through the right auricle into the great reservoir of the systemic veins. These facts and this explanation enable us to understand the distention and pulsation of the veins of the neck, and also the bloody expectoration. The latter is only a sign of the over-distention of the pulmonary blood-vessels, which in this case is due not only to the obstruction of the heart that we have been studying, but also, in part, to the diminished capacity of the lungs produced by the hepatization of one, and the compression of both, by a pleural effusion.

There is still another point. Your attention has been called to the fact that the skin is not only œdematous, but also purplish. Why is this? It is, as, indeed, has already been intimated, because the venous radicles, or, if you choose, the capillaries of the skin, are distended by venous blood, and by the same mechanical causes which produced the bleeding from the lungs, the obstruction of the heart, and the retrogression of the blood from the right ventricle into the systemic veins. In those parts of the body where the circulation is relatively feeble the discoloration is greatest, because in such parts the returning venous blood is opposed by a heavier column and is propelled by a weaker force. On the other hand, where the circulation is relatively more active, as in the face, this dingy tint is less decided. It is the natural office of the tricuspid valve to obviate this very condition of things, by preventing a reflux of blood from the right ventricle into the venæ cavæ.

The urine of the patient, as you have heard, is albuminous, and there is general dropsy. Is this dropsy due to a primary affection of the kidneys produced by the cold and wet the patient was exposed to, or is it due, as it may be, secondarily to a mechanical congestion of the kidneys produced, as the general venous congestion is, by the condition of the thoracic organs? It is a safe rule in reasoning to invoke no more causes than are necessary to explain an effect; and, as the last-mentioned causes are sufficient in the present case, it is unnecessary to go beyond them. For what is albuminuria? it is merely a symptom of various anatomical conditions of the kidneys, the common element of which is an impeded circulation of the blood through those organs. The most irremediable as well as the most transient conditions may occasion it; and often it

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is impossible to estimate its value unless we know whether it is permanent or temporary. In this case we have not had time to determine the duration of the albuminuria; but we are entitled to assume that it dates no further back than the symptoms which followed the accident that befell our patient, and, consequently, that its cause is congestion, and not degeneration, of the kidneys.

In regard to the treatment, I would remark that it should consist, in the first place, of rest, and of such diet as will tend to maintain and, if possible, improve the strength. But, as the patient's present debility depends neither on original weakness nor on direct exhaustion, but mainly upon a mechanical impediment to the performance of those essential functions which are delegated to the heart, lungs, and kidneys,—that is to say, upon venous congestion and serous effusion,—the indication is clearly to remove these last-named conditions. If we could draw off the exuded serum through the skin, the bowels, or the kidneys, we might hope to afford speedy relief; but it is questionable whether the attempt to do so by very active medicines would not prove too exhausting. I shall attempt, however, to attain our object by administering digitalis, with the purpose of promoting diuresis, of steadying and toning the action of the heart, and of controlling the pulmonary hemorrhage by contracting the capillaries of the lungs. The tincture of foxglove, then, will be given, in doses, at first, of ten drops three times a day; subsequently it will be gradually increased, until its operation is indicated by a diminished frequency of the pulse. This medicine will be administered in a solution of acetate of potash,—about twenty grains in four ounces of water,—and its operation promoted by barley-water. If the bowels are confined, they should be unloaded by mild laxative pills at first, and afterwards, if the patient's strength will permit, purgatives of jalap and cream of tartar should be administered. This treatment is rational; but it may, nevertheless, be unsuccessful, if the changes are already far advanced, or if the vital power is sunk beyond the reach of their assistance.

SEQUEL.—The bronchial effusion which had been denoted by moist rhonchi and a bloody expectoration gradually produced asphyxia, and before another week the patient died. The left lung was everywhere œdematous, upon the edges emphysematous, and in the lower lobe was an apoplectic nodule as large as a walnut. In the right lung, the entire lower lobe was in a state of red hepatization, and the pleural cavity contained twenty ounces of liquid. The heart was very large and firm, and weighed twenty-four ounces; its tricuspid orifice enormously dilated, and its mitral orifice contracted and hard. The liver was about the natural size; it weighed fifty-four ounces, was closely adherent to the diaphragm, and entirely enveloped by false membranes, which were evidently not of recent origin (*peri-hepatitis*). The abdominal cavity and the general connective tissue contained abundant serum. The kidneys were enlarged, the left weighing eight, and the right six and a half, ounces.

ORIGINAL COMMUNICATIONS.

ON A CASE

OF SPLENIC AND LYMPHATIC HYPERTROPHY WITHOUT LEUCOCYTHÆMIA (HODGKINS' DISEASE — ADÉNIE—PSEUDO-LEUCÆMIA).

BY DR. H. C. WOOD.

IN the month of August I was asked by Dr. Fricke to see, with him, a case in the northern part of the city. Mr. ——, aged about 30 years, had served in the army during the last six months of the rebellion, chiefly in Virginia, much of the time in malarious districts, during which he suffered severely from camp-diarrhœa or dysentery, but never had any distinctly malarious disease. After his return, he resumed his occupation, that of a confectioner. At this time, he states, he was an exceedingly powerful man, lifting a barrel of flour with ease. His habits were in every respect moral; strictly temperate; never had syphilis or gonorrhœa. His work was very heavy, consisting chiefly in kneading and handling immense pound-cakes, and was done altogether with his right hand, his body being bent sharply to the left in a constrained position. To this he himself attributed his attack. His wife, after his death, stated that ever since she had known him—three years—he had been troubled with looseness of the bowels and sudden attacks of diarrhœa. Four months ago, in April, he was taken with pain in back and left side; this pain was chiefly dragging and heavy. During the next two months he had occasional attacks of diarrhœa, but was treated chiefly for the persistent pain, which was believed to be rheumatism. During the last two months he has lost flesh and strength rapidly, and a few days ago sent for Dr. Fricke, who at once determined the case to be one of diseased spleen. The following is taken from my note-book:

August 15. Man very thin and weak, but able to walk about the room. Skin natural in color but pale, and temperature normal. Tongue clean. Heart and lungs normal. Abdomen enlarged, apparently free from fluid. Spleen very much enlarged; the area of decided percussion dulness 5½ inches vertically, 6½ transversely; its surface smooth, hard, its edges rounded; decided tenderness when strong pressure is made upon it. Liver enlarged, its smooth edge reaching about an inch below the ribs; vertical percussion dulness 5½ inches. Urine normal, save only that it contains some minute crystals of phosphates and a good deal of mucus. Has not either sexual desire or power, nor has he had for two months. Legs slightly œdematous. Has had iron and quinine, and an ointment of iron and belladonna over region of spleen. Examined, with Dr. Fricke, blood microscopically: certainly no increase in white blood corpuscles. 16. Has decided fever this morning. Ordered tr. iodin. comp. gtt. v, t. d. 17. Has some fever; skin hot and dry. 25. Patient worse since last entry; feet very much swollen; is weaker and more emaciated; has had fever occasionally; a good deal of irritation of the stomach, possibly caused by iodine, and also diarrhœa. Examined blood carefully microscopically; the white blood corpuscles found were very few in number, certainly below rather than above the normal proportion. Ordered tr. ferri chl. gtt. xxxv and cinchon. sulph. grs. ii, t. d.; also decoction of broom (Scoparium). 28. No decided change, but marked increase in flow of urine. 30. No especial change since last entry. Patient has had no fever for several days. *September* 12. Not very much changed, but decidedly paler and weaker; hardly able to walk a few steps; occasionally has fever, no regularity perceptible in its attacks; spleen, by palpation and percussion, 8½ inches transversely by 6 vertically, apparently not quite so hard as before, smooth; vertical liver-dulness 5 inches; pulse 96, excessively dichrotic; a very decided basal systolic murmur, anæmic in character of its sound; tongue clean; appetite pretty good; legs very œdematous. 29. No change since last entry; merely a steady advance in severity of symptoms; more or less frequent attacks of diarrhœa and of fever; progressive emaciation; great loss of strength, so that he is not able to stand alone now; general hue of skin that of intense anæmia; lips almost white; nothing like cancerous cachexia; no œdema now (probably partly from his being constantly recumbent); decided ascites; spleen very hard; lymphatics of neck, axilla, and groin decidedly but not greatly enlarged. *October* 1. Examined blood microscopically: certainly diminution, rather than excess, in proportionate number of white blood corpuscles; not more than one field of an ⅛th in three contained any, and only once, out of a number, were two found in a single field; red corpuscles pale, showing no tendency to adhere in rouleaux. 8. Man died quietly of exhaustion.

Autopsy, about 36 hours after death.—Body emaciated, pale. *Thorax.*—Pleura containing a large quantity of serous fluid. Lungs healthy. Blood-vessels normal. Heart small, pale, somewhat soft; valves healthy. *Abdomen.*—Liver very much enlarged, fatty, nutmeg; no heterologous deposits in it; consistence much firmer than normal. Pancreas large, hard.

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Stomach normal. Intestines thin; their mucous membrane pale; no enlargement perceptible of the simple glands; Peyer's glands a little more prominent than usual; not ulcerated; suprarenal capsules normal. Kidneys rather small, normal; no heterologous growths discovered. Spleen very much enlarged and hardened; as laid on a plate, eight inches long, five and three-quarters broad, and nearly four thick; color very bright red, almost scarlet, mottled with numerous dark spots and with some yellowish ones; capsule readily detachable; showing on section a narrow external zone of bright red; internally, darker red, a sort of reddish liver-colored, with numerous very dark spots or masses closely placed. There were also a few masses of a straw-yellow color scattered through the spleen. These masses were of various shapes and sizes; not very numerous. The largest was of a wedge-shape, the base against the surface of the spleen; the edges irregular in places, folded in, with one or two lines of deep red external to them and everywhere following their contour. This patch is one and a quarter inches long and three-quarters of an inch across the base. The whitish material appeared to be formed in centre of the dark patches; at least, quite a number of such spots exhibited a minute central whitish spot, similar in appearance to the larger whitish ones. *Lymphatics* enlarged both in thorax and abdomen, and still more so in the axilla, neck, and crural regions. The only superficial glands taken out were from the groin. These were about an inch in length, and were larger than the internal glands.

Microscopic Examination.—Spleen.—Pulp containing usual elements, fibrous tissue, nucleated trabecular cells, and pulp cells. The latter appeared more granular and less distinctly nucleated than normally. *Red Spots.*—These appeared to be chiefly colored by an intense hyperæmia; not so much, however, by the distinct presence of blood as by an excessive overplus of coloring-matter. The latter was not contained so much in distinct globules, as it appeared to penetrate everything. There were a very few pigment granules. The red spots could be in great measure washed out, and, under the microscope, presented no other elements than such as were found in the pulp elsewhere; only everything intensely red. A very few pigment granules were seen, and in one place was found, in the centre of a dark spot, a somewhat cylindrical, dark-green, hard, flattened mass of nearly a line long. Nowhere else were any indications found of masses of blood having existed. *Whitish Spots.*—Composed almost entirely of cells similar to those of the pulp, but smaller ($\frac{1}{2500}$ to $\frac{1}{4000}$), shrunken, a little more inclined to be globular, never nucleated, and filled with granules; some oil, but not much. *Malpighian corpuscles* were not at all evident. I dissected one out of the centre of one of the dark spots. It appeared normal, save that it was of an intensely red color.

Among the first distinct recognitions of a disease whose anatomical characters were great enlargement of the lymphatic glands and of the spleen, with which I am acquainted, is that of Dr. Hodgkins (*Medico-Chirurgical Review*, vol. xvii.). In this paper, however, there were no microscopical examinations of the blood, and it is therefore uncertain whether the affection was actually the disease since known as Hodgkins' disease, or whether it was leucocythæmia. In a paper published in *Recueil des Travaux de la Société Médicale d'Observation*, 1857–58, to which I have not, however, had access, Dr. Bonfils appears to have described for the first time what have been considered since as the chief characters of the disease,—namely, glandular enlargement without increase of the white corpuscles of the blood. Since this time there have been some half a dozen papers upon this affection; and in the *Archives Générales* for 1865 there is a good *résumé* by Dr. Cornil of our knowledge upon the subject, with one or two excellently observed cases. In the last edition of the Clinique Médicale, by Professor Trousseau, there is a brilliant lecture upon this affection, its clinical history and pathology. The doctor gives to the disease the name of Adénie, and assigns to it, as clinical characteristics, great and progressive enlargement of the lymphatic glands, without any tendency to suppuration or resolution, and finally death of the patient, sometimes from intercurrent accidents, as suffocation from the pressure of the enlarged glands upon the respiratory passages, or, escaping these, from intense anæmia, with diarrhœa, hectic fever, colliquative sweats, etc. In only three out of twelve observations was there any enlargement of the spleen, and in these this was preceded by enlarged lymphatics, and belonged, Professor Trousseau states, strictly to the second stage of the disease. The disease was chronic in its nature, lasting from twelve to eighteen months, or even longer; and in several cases the patient was apparently in excellent health, although enormously enlarged lymphatics had already existed for months.

In the cases described by Dr. S. Wilks, in *Guy's Hospital Reports*, 1865, under the name of Hodgkins' disease, the enlargement of the spleen was a more constant and more striking feature; but in other respects the agreement is complete,—the same enlarged glands and the same peculiar whitish masses found in the spleen. There is, therefore, a disease described by these authors closely allied to leucocythæmia,—so closely, that it is impossible to distinguish between the two, either before or after death, save by the microscopic examination of the blood, their clinical history and post-mortem appearances being otherwise exactly similar. In leucocythæmia, however, there are, as is well known, two sets of cases,—namely, the lymphatic and splenic,—in the one of which the glands are chiefly, or even solely, affected; whilst in the other the spleen bears the brunt of the disorder.

The splenic variety is certainly the most common; but that there are certain cases of leucocythæmia in which the spleen remains healthy whilst the lymphatic ganglia become enormously enlarged, is attested, from personal experience, by both Virchow and Niemeyer. All the cases of the allied adénie hitherto published have corresponded more closely to the rarer form of leucæmia, the glands being very greatly and primarily affected.

The case herein detailed, I conceive, presents hitherto unnoted clinical characteristics, in that the affection of the spleen was primary, and the enlargement of the lymphatics was manifested late in the disorder and was at no time sufficient to attract attention. The parallelism between the two diseases is therefore now complete, both of them exhibiting a splenic and a lymphatic form; although it is worthy of remark that, so far as I am aware, no case of Hodgkins' disease has been reported which ran its full course, with death from anæmia without accident, in which the spleen was not finally enlarged.

There is one anatomical change, occurring not infrequently in leucocythæmia, which has as yet scarcely been noted in adénie, namely, the formation of masses of lymphatic tissue in the liver, kidneys, etc. I do not think this, however, can at present be allowed to be a point of difference. The masses alluded to are not new tissue formation. Von Recklinghausen and other German histologists have demonstrated, or at least rendered extremely probable, the existence of minute lymphatic masses or cells in all these glandular organs; and the interpretation of the appearances alluded to is simply that such minute portions of the lymphatics have partaken in the general hypertrophy. Friederich, to be sure, claims to have demonstrated that these formations take their origin in the connective tissue corpuscles; but I do not think, at present, this can be acknowledged. I see, therefore, nothing more than was to be expected in the leucæmic tumors of the liver and kidneys, and believe the reason that they have not been more frequently found in Hodgkins' disease is the exceedingly small number of the cases that have been well observed. According to Dr. Cornil, moreover, M.

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Hérard has observed this formation of apparently new lymphatics in a case of adénie, in the lungs, ovaries, and mucous membranes of the stomach: so that I do not see how the exact parallelism between the two affections can be denied.

In regard to the nature of Hodgkins' disease, Dr. Wilks advances the opinion that it is a constitutional disorder, closely allied to tubercle and cancer, characterized by a peculiar exudation in the spleen tissue. This is evidently an erroneous theory. It is hardly possible to conceive a disorder of the same class as tubercle in which the deposit is always confined to a single organ; and, moreover, similar masses are found in the spleen in leucocythæmia, more rarely in chronic malarial hypertrophy, and also in ulcerative endocarditis. They are, in truth, not deposits at all, but are the results of arrest of circulation, and are the so-called "hemorrhagic infarctions." In heart-disease, they are often directly traceable to the presence of emboli stopping up the smaller splenic arteries. In the case described in the present paper, their method of formation was very clearly shown. The first step was evidently a damming of the circulation in the intertrabecular spaces by the rapid multiplication of cells. In this way were formed the very numerous and prominent dark spots. The changes into whitish tissue evidently commenced in the centre of these dark masses, as the result of a complete arrest of the circulation, and gradually spread as the effect of this arrest widened. Where a large triangular mass of tissue was involved, there was, without doubt, a secondary formation of a thrombus in a large vessel by coagulation taking place owing to the impeded blood-current. The microscopical examination bore out entirely this view, as the cells of the "deposit" consisted simply of shrunken splenic pulp cells, with oil granules and *débris*, and a small proportion of trabecular tissue.

The post-mortem study of the case fully carried out the view held by Trousseau, Cornil, and Niemeyer, that the changes in the spleen consist principally in a hypertrophy of the pulp of the organ, the cells, as I think, being less fully developed than normally, exhibiting, in a word, the characters found wherever there is excess of formative at the expense of developmental action.

The theory that leucæmia is owing to an overaction in the lymphatics and spleen, resulting in the production of an overplus of white corpuscles, which, from being imperfectly developed, are unable to pass into red corpuscles, although by no means proven, seems to me to be the best that our present knowledge will allow. The physiology of the spleen is certainly not finally settled. Indeed, Dr. Flint, Jr., in his great work, asserts that our knowledge of it amounts to nothing; yet its connection with formation of the blood seems to me very plainly shadowed forth. It is well known that two theories have been advanced,—the one of which attributes to the spleen the function of forming white blood corpuscles; the other, the destruction of the red. It is by no means impossible that both of these are true; for the idea of such a double function involves no absurdity. If it be so, the two affections leucæmia and pseudo-leucæmia, connected as they are with apparently identical changes in the spleen, represent respectively abnormal states of the two functions,—in the former, an excess of imperfectly developed white corpuscles resulting; in the other, a rapid destruction of the red corpuscles, and consequent deterioration of the blood. In this connection, it is interesting to observe that no case is as yet recorded* in which the patient died of the characteristic anæmia without splenic hypertrophy. There have been, it is true, several instances in which the disease proved fatal without marked implication of the spleen; but the cause of death was not anæmic exhaustion, but gradual suffocation from pressure upon the trachea or bronchi by the enlarged glands. Moreover, there have been cases in which the lymphatics were enormously hypertrophied, and had been so for years, the general health of the subject remaining good, until, the spleen commencing to enlarge, the characteristic anæmia appeared.

These clinical facts or coincidences are certainly very interesting; but a much greater number of well-observed cases and more complete knowledge of the healthy organs are requisite before any permanent theory of the disease can be made out.

As to the etiology of the affection, our ignorance is at present absolute, and the case here reported is in strict agreement with most of those hitherto observed, in having no tangible cause. Professor Trousseau endeavors, it is true, to connect adénie with a prolonged irritation of some mucous membrane; but I do not think he at all establishes this. There have been several cases reported in which no such irritation had existed; and some of the cases upon which Professor T. relied as establishing his theory were observed so loosely that it is not certain they represented the disease. In the present instance the previous camp-diarrhœa had too long passed away to bear any direct relation to the fatal disorder. It is true, there was an indistinct history of subsequent disorder of the bowels made out after the death of the patient; but, from close cross-questioning of his friends, it appeared to have been more of the nature of relaxation than irritation. The circumstance that no affection of the bowels in the years previous to the attack was spoken of by the patient, although closely and frequently questioned on his history, would appear to forbid any importance to be attached to the after-statement of friends.

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CASE OF ERECTILE CANCROID OF THE VAGINA.

BY L. K. BALDWIN, M.D.

I WAS summoned in haste, on the evening of November 24, 1869, to see Mrs. B., aged 31, who was flooding. I was somewhat surprised at the announcement, having had a conversation with her a few weeks previous in regard to her condition, she assuring me that she had never enjoyed better health, and was quite regular in her menstrual periods. On

* Perhaps this is asserted too positively; I certainly have not been able to find such case.

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going into her chamber, I found her lying on the bed in a somewhat excited condition, having lost some blood, though the amount was not sufficient to cause alarm. She stated that it had come on suddenly while using some exertion in dressing herself in a fancy costume for the amusement of some young friends who were paying her a visit. I had attended her about one year previous to this time for a vesicular mole, at which time she came near losing her life from hemorrhage, and she feared she was again to pass through a similar ordeal. I proceeded to make an examination of the parts, and was not a little surprised to find that the hemorrhage was not uterine, but proceeded from a small vascular tumor, erectile in its nature and appearance, situated on the upper wall of the vagina, closely hugging the pubic arch, and, of course, in immediate contact with the urethra. The tumor was about the size of a walnut without the hull, attached to the mucous membrane by a rather wide base, but, at the same time, within easy reach of the finger. The hemorrhage was purely arterial in character, and spurted out from the middle of the tumor, to the distance of six inches, in several jets of the size of a fine knitting-needle. I made an application of Monsel's solution to the surface, then placed a compress over the parts, and confined all in place with a T bandage tightly drawn, enjoined rest in the recumbent position, and left her until morning. I found, on visiting her in the morning, that there had been no further hemorrhage, and she felt quite comfortable, and was desirous of getting up, which, of course, was positively forbidden. In the course of a few days the coagulum formed by the application of the iron became loosened, and there was a return of the hemorrhage, which was promptly checked by the same means. The tumor was found to be so vascular in its nature as to give rise to hemorrhage on the least exertion or motion of the parts surrounding it.

In consultation with Dr. Goodell, of the Preston Retreat, who saw the case with me on the second or third day after the first hemorrhage, it was decided that the safety of the patient depended on the removal of the tumor and the securing of the bleeding vessels. The plan adopted consisted in passing a strong double ligature through the base of the tumor, and tying it in two sections. This was done on Wednesday, December 1, seven days after I first saw the case. The ligatures cut their way through in a few days, the mass coming away in one piece without hemorrhage, leaving an apparently healthy surface underneath. After having got rid of the offending mass in the way mentioned, we counted on a speedy recovery of the patient. In this we were most sorely disappointed, as the subsequent history of the case will show. Things appeared to progress favorably for a few days, the spot from which the tumor was removed still retaining a healthy, granulating appearance, and nothing untoward occurring save a dark-colored and exceedingly offensive discharge. This increased so in quantity and offensiveness that we were led to make a second exploration about two weeks from the time of making the first. This examination revealed to us an excrescence much larger than the one we had removed, springing from the portion of the anterior wall of the vagina not involved by the previous growth, but extending far enough forward to be plainly visible on forcible separation of the labia. It had much the same external appearance as the one removed, but showed no tendency to bleed on being handled. The discharge was of the color and consistency of dark treacle, and was so offensive as to render the air of the chamber unbearable and make the patient loathsome to herself and those around her, besides interfering materially with her health. The general appearance of the last excrescence, its rapid growth, and the exceedingly offensive nature of the discharge from it, soon convinced us that we were dealing with a cauliflower cancer, instead of a benign tumor of an erectile character, as we had supposed the first to be. The patient assured us that she had no knowledge of the existence of anything like a morbid growth in the vagina until made painfully conscious of it by the occurrence of the hemorrhage which took place on the evening of November 24, when I was called to see her. From the position occupied by the first, it would seem impossible for it to have existed for any length of time without her being made aware of it in some way or other; for it was far enough forward to be plainly visible on separation of the labia, and, of course, was subjected to pressure or abrasion in any position she placed herself. No hemorrhage of any account ever took place from the growth which made its appearance subsequent to the removal of the first; but the discharge grew more copious and lost none of its offensiveness. Frequent use of injections strongly impregnated with carbolic acid served to keep her in a comparatively comfortable condition and destroy the offensive emanations. Quinine, iron, and stimulants were freely given for the support of the patient, who soon began to go down both mentally and physically, she having been made acquainted with the fact that her disease was of a much more serious nature than we at first supposed, and would most likely in the end prove fatal. She had a horror of cancer, her father having died of cancer of the stomach, and her grandfather of cancer of the nose. At the request of the family, Dr. Agnew saw the case with me on Sunday, January 2, 1870, and, after a careful examination, confirmed the diagnosis previously made. Notwithstanding our perseverance in the use of the most supporting treatment, coupled with a generous diet, of which she took liberal quantities, her stomach at all times being able to retain them, she gradually sank, and died on January 5, 1870, or in about six weeks from the time the first hemorrhage occurred.

Sectio cadaveris, thirty-six hours after death. Body well preserved by ice; waxy in appearance; not much emaciated. Pelvic and abdominal cavities only examined. All the abdominal viscera found entirely healthy and normal in appearance. Small cysts found in each ovary. Uterine walls somewhat thickened, but otherwise in a healthy condition. Cavity of uterus also healthy. Springing from the anterior wall of the vagina were found a number of quite large soft cancerous growths, an outcropping of which had been removed by strangulation several weeks previously for the relief of hemorrhage. These growths were so large as to distend the vaginal canal. They had their origin entirely from the anterior wall. The other parts of the vaginal tract were somewhat injected and thickened, but otherwise free from disease.

A microscopic examination of a section of the tumor, kindly made by Dr. H. Y. Evans, showed positively its cancerous nature.

Remarks.—The amount of blood lost at each hemorrhage was small, and consequently her rapid failure could in no wise have been caused by depletion. The case is one of considerable interest in several particulars:

1. The entire absence of pain, and the want of knowledge of the patient of the existence of a morbid growth until the occurrence of the first hemorrhage.

2. The rapidity with which the subsequent growths made their appearance after the removal of the first.

3. The fatal termination in the short space of six weeks, the patient being previously in robust health. Of the cancerous nature of the excrescences there can be no doubt; but why they should, in spite of all treatment, have gone on so rapidly to a fatal termination, appears to me mysterious.

4. The great difficulty of diagnosis between benign erectile tumors of the reproductive organs and erectile cancroids, a difficulty which Virchow can only explain on the theory that simple papillary growths of these parts have a tendency to become malignant, and therefore advises their early removal by the galvano-caustic apparatus.

NOTES ON CHLORAL.

BY DR. H. Y. EVANS.

IT seems to me that the remark so often made "that we are governed by fashion in medicine" is an erroneous one. The underlying cause of the disposition to change and drop certain remedies after a period of varying success is owing, in a great degree, to the use of an inferior preparation. The numerous reported failures in the use of hydrate of chloral seem to make this fact especially true in regard to this drug.

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I have noted the effects of this drug in twenty-four consecutive cases.

In the first *sixteen* cases (in doses of grs. xxv to xxx) its effects were really delightful.

In the *seventeenth* and *eighteenth* it failed in producing anything but delirium and a subsequent headache.

In the *nineteenth*, *twentieth*, and *twenty-first* cases the effects were entirely satisfactory.

In the *twenty-second* (nephralgia), grs. xxx, repeated every hour for three hours, resulted in wakefulness and headache.

The use of it in the *twenty-third* and *twenty-fourth* cases resulted, within an hour, in vomiting and delirium, and, at the expiration of eight hours, a heavy, unpleasant sleep.

Cases *seventeen*, *eighteen*, *twenty-three*, and *twenty-four* were most suitable ones for happy effects. The failure, therefore, made me anxious to discover the cause. On inquiry as to the character of the preparations used in these cases, I was convinced that three out of four of my failures were directly due to the use of an inferior and deleterious drug. These preparations had a heavy, dead, camphory odor, and, in one instance, a dirty appearance.

The fact mentioned by Dr. Baldwin—that a small dose (grs. xv) largely diluted (in f℥ij of fluid) seems to act *more promptly* and more pleasantly than a large (grs. xxx) one sparingly diluted (in f℥iij of fluid)—is an important one; and I am so convinced of its truth that I invariably act upon it.

CASE OF PROTRACTED RECOVERY

FROM EXTENSIVE COMPOUND COMMINUTED FRACTURE OF LEG.

BY DR. ELLIOTT RICHARDSON,

Late Senior Resident Physician of the Pennsylvania Hospital.

THE uncertainties of prognosis are frequently illustrated by fatal results from apparently trivial causes, while, on the other hand, it is sometimes our fortune to witness wonderful recoveries from injuries which would generally be considered almost necessarily fatal, either to life or to the usefulness of the member affected.

The following case possesses some interest, not only on account of the ultimately favorable result, but also on account of the protracted recovery.

A railroad employé, 31 years of age, of good height and physical development, in good health, but not free from the use of alcoholic drinks in excess at times, was admitted to the Pennsylvania Hospital, under the care of Dr. W. Hunt, October 29, 1869, suffering from injuries received by being run over on the railroad.

On examination, the right thigh was found to be much swollen and discolored, giving evidence of very serious and extensive contusion of the part. The knee-joint was unharmed, but below the knee the limb was extensively injured. On the inner and upper side, about three inches below the joint, was a lacerated surface about three inches in length, communicating by a rather narrower opening with the seat of a comminuted fracture of the tibia. At a distance equal to about one-third the circumference of the leg on the upper and outer side was a wound about an inch in length, which was found to communicate with a fracture of the fibula.

The fracture of the tibia was freely examined at the time, and found to include, as nearly as could be ascertained, the entire shaft of the bone for a distance of two and a half inches to three inches, the fragments consisting of a large one and a number of smaller ones. The fracture of the fibula was not comminuted.

The patient was profoundly depressed at the time of admission, but, gradually recovering, efforts were made to save the limb. He remained in the hospital until April 6, 1870, during which time several fragments of bone were removed through the sinuses, four in number, communicating with the fracture. At the time of his discharge the fibula had united, but the tibia showed no evidence of attempt at union, and the patient, refusing to submit to an operation for the removal of a large fragment of necrosed bone, went to his home.

On the 22d of June I saw and examined the leg. No union had yet occurred between the two fragments of the tibia. The sinuses still continued to discharge minute spiculæ of bone. On introducing a probe, it was freely passed over a denuded surface of bone for a distance of at least two inches.

When I next saw the patient, October 6, 1870, I found both bones of the leg firmly united. A large amount of necrosed bone could still be detected; but he had so far recovered the use of his limb as to be able to walk with the aid of a cane. There was shortening produced by a marked curvature towards the tibial side, but the muscular development and usefulness of the limb seemed to be good.

It will be seen, from the above, that nearly a year elapsed before union between the fragments of the tibia occurred, and that it occurred at last between fragments of bone separated two or three inches from each other.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF DR. WM. HUNT.

Reported by Morris Longstreth, M.D., Resident Physician.

CASE I. REDUCTION OF A SCROTAL HERNIA BY POSITION.—Wm. Bushhouse, æt. 46, admitted October 3, 1870, with an irreducible inguinal and scrotal hernia of the right side. The hernia had existed for a long time, and occasionally had been a source of trouble, probably from slight inflammatory attacks of the sac. He had been in the habit of wearing a truss, but it was found to be poorly adapted to the case. An attempt was made at reduction, without and with ether, and was followed by no success. As the case presented no urgent symptoms, the patient was kept at rest, sedative applications were made to the tumor, and a large dose of opium was given immediately and repeated at proper intervals. After the lapse of a few days, no urgent symptoms having presented themselves, and the tumor still remaining as before, a small platform was rigged, and the scrotum, tumor and all, elevated at an angle of 45°. Gradually the tumor decreased in size, nothing remaining in the groin but a part of the hardened sac, which was unusually dense,—so much so as to give the sensation of a third testicle. His bowels moved freely, without the aid of any purgative, after the discontinuance of the opium. A double truss was procured for him, as a smaller hernia existed on the other side, and he was discharged cured.

Case II. GUNSHOT WOUND OF LIVER, JEJUNUM, AND KIDNEY.—Samuel Height, colored, æt. 25. Admitted on the night of election-day, with a gunshot wound of the abdomen in the median line, two and a half inches below the end of the ensiform cartilage. No wound of exit could be discovered. While in lateral decubitus hemorrhage was free, and ceased when in dorsal decubitus. Patient was suffering greatly from shock. He was ordered to have heat applied to his extremities, and a small amount of stimulus. No vomiting. Died twenty hours after admission. He took 20 grains of opium, and this amount was hardly sufficient to control his suffering. Bowels not moved. Urine passed freely and was normal.

Post-mortem examination showed a perforating wound of the left lobe of the liver, a division of the coronary artery of the stomach two inches from the pylorus, three perforations of the jejunum, and a wound of the left kidney. The ball was found subcutaneously in the left lumbar region. Death occurred from hemorrhage and peritonitis. Here is a case strikingly illustrative of the fact that it is the damage the ball does in its course that the surgeon has to deal with, and very often the position of the ball itself is of no great importance. This fact would seem to be almost self-evident; and I only mention it because we are constantly worried by the patient and his

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friends, and by the public through the newspapers, as to the ball, there being a prevailing impression that if this is gotten out safety is assured. Of course, in most cases all reasonable efforts should be made to obtain it; but, if this is done at the sacrifice of more important considerations, great evil may ensue. In the present case its position was of no importance whatever in producing the fatal result.

Case III. Recovery from Gunshot Wound of Abdomen. — George Firth, æt. 16. Admitted on the night of election-day, with a gunshot wound of the abdomen on the left side, midway on a line from the crest of the ileum to the umbilicus. He complained of pain, and was ordered two grains of opium, by suppository, every hour until he slept. He was quiet all next day. At the evening visit on the following night his pulse was found accelerated and bounding, and the abdomen was moderately tympanitic. Ordered a turpentine stupe and the suppositories as before. Turpentine was applied freely during the following day, and it produced vesication of the integument. Opium was not required further in the treatment. He was asleep or drowsy during the seventy-two hours following admission. The diet was strictly fluid for one week. No further symptoms. No bullet found. Bowels were not opened until the 10th day. Discharged on the 14th day.

Case IV.—J. D., æt. 79, in infirm health. He had been a patient in the hospital 134 days during the year 1868, from a crush caused by a hogshead of molasses. Admitted November 12, 1870, with an incised penetrating wound of the abdomen in the right inguinal region, midway on and one inch from the line of Poupart's ligament. Intestine was protruding. Pain was very severe. He was ordered to have two grains of opium by suppository every second hour until quiet. This was continued until death occurred. He lived fifty-seven hours, and received fifty-four grains of opium without any symptoms of narcotism. The nurse reported that "he was no more sleepy than if he had had a tablespoonful of morphia solution." The pain was entirely localized to the wound. Fecal matter was discharged freely through the wound. No tympany. Bowels were not moved.

Post-mortem examination showed two wounds of the ileum, —one dividing the coats entirely, and this part of the bowel was found adherent at the point of incision in the walls of the abdomen, presenting an open mouth; the other involved the outer two coats, and was covered by lymph. Peritonitis was circumscribed to a few coils of intestine. Died from exhaustion rather than peritonitis.

These cases show the absolute necessity of the free but judicious use of opium, not only as a means of relieving pain, but also for the purpose of confining the bowels, so that there may be not only no evacuation of the intestine, but that we may as far as possible control their peristaltic action, keeping them, as it were, in splints. Thereby we favor attempts at adhesion in cases where there has been a solution of their continuity, or perforation. Our efforts in this direction are to be continued for at least a week or ten days. There is perfect safety in this method of procedure, as no accumulation of fecal matter during this period can be a cause of danger to our patient. In the first place, if the diet of the patient is properly directed, the accumulation can be only small in quantity; secondly, we have reason to believe, from the anatomical arrangement of the parts, that the cæcum and large intestine are passive receptacles of the useless and excrementitious results of the digestive processes. As long as accumulation is confined to this portion, no possible danger from absorption can arise. The large intestine, unlike the gastric mucous membrane, that of the upper bowel, and that of the rectum, has, there is reason to believe, no absorbing power, or, if so, to a very limited degree. From observations taken in a case detailed in the Pennsylvania Hospital Reports, 1868, p. 165, where an artificial anus existed in the ascending colon, the fact of its inability to absorb matters placed in contact with its surface seems proved. In this case no effect on the system could be produced by such medicinal agents as laudanum or morphia, or by anything placed on as a dressing. As to the digestive powers, they were absolutely nothing. Various articles of food placed within the gut were found on removal to be unchanged, except from maceration. No portion was lost or dissolved.

In a healthy person, accumulation does not take place in the rectum until just before the call to stool; and when, as in our cases, the peristaltic action is in abeyance, it is left free for the absorption of such medicinal agents as we may choose to introduce. The sigmoid flexure serves for a "trap," retaining all excrementitious matters within the large intestine, until, at such times as the peristaltic action passes onward further accumulations, a descent into the rectum takes place, and the call for stool comes on.

The principles for treatment in such cases—however hopeless gunshot and penetrating wounds of the abdomen, where an injury of any viscus has occurred, may be—are, primarily, free administration of opium to control pain and the natural peristaltic action of the bowels, and, secondarily, the control of the diet within such limits as merely to sustain the strength of the patient until the dangers of inflammatory troubles have passed.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. E. L. DUER.

Reported by H. G. Landis, M.D., Resident Physician.

A CASE OF ACUTE DESQUAMATIVE NEPHRITIS, OCCURRING IN A CHILD AGED SEVEN MONTHS.

C. G., æt. seven months, in the nursery wards of the Philadelphia Hospital, was noticed, August 5, to have slight diarrhœa, and boils on the trunk, principally on the back. The latter appeared in successive crops, but, under supporting and tonic treatment, were entirely removed. The diarrhœa, in the mean time, became excessive, and by the 11th the child presented well-marked symptoms of entero-colitis. The diarrhœa was permanently checked on the 14th, and from that time on the evacuations were never more than from one to three in the twenty-four hours. The child, however, was much prostrated, and symptoms of cerebral disorder, which were more or less evident at an early period of the diarrhœa, became very prominent by the 18th. The head was hot, the eyes rolled up during sleep, and occasionally strabismic, the pupils contracted. Sinapisms to the back of the neck and cold to the head afforded slight relief only. On the morning of the 30th, the child having grown gradually weaker, opisthotonos appeared as the precursor of death, which occurred in the evening, immediately preceded by great difficulty in respiration. The child had so far presented nothing at variance with, or in addition to, the diagnosis of entero-colitis. In eight autopsies of this disease which I have had the opportunity to make, cerebral lesions coexisted, and either hemorrhagic effusions on the upper and anterior surface of the cerebrum or meningitis with more or less lymph, or both these conditions were found. The same result was anticipated in this autopsy, which was made twelve hours after death.

The child was neither emaciated nor œdematous. The mucous membrane of the intestines was soft, pale, and easily detached, and the whole intestine broke readily on slight tension. Peyer's patches and the mesenteric glands were normal. Spleen healthy. The liver was anæmic, of a light ochre-color, with some ecchymotic spots on left border, and remained unchanged by application of Tinct. iodinii. The lungs and heart were healthy. The brain showed deposits of lymph on its upper and anterior surface. The membranes about the pons varolii were inflamed. The spinal cord was not even congested. The kidneys, when examined, proved to be large, flabby, and anæmic, with a number of ecchymotic spots in the cortical substance. On microscopical examination, the tubules were found to be granular. The bladder was distended, and about two ounces of urine were drawn off and examined. It was very albuminous, sp. gr. 1017, and contained granular and hyaline casts, red blood corpuscles in profusion, and a variety of epithelium cells, mainly ovoid ones from the tubules.

The child had never had scarlatina. The case is therefore a rare one. It would be of great interest to determine whether the initial lesion occurred in the kidneys or intestines, or whether there was a blood lesion behind them both. Certainly no symptom, under the circumstances, would have led to the supposition of a renal disorder at any time of the disease.

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THURSDAY, DECEMBER 15, 1870.

EDITORIAL.

THE MARINE HOSPITAL SERVICE.

AS the nature and object of this service are very commonly misunderstood, the following brief statement may be of interest:

By act of Congress, dated July 16, 1798, the sum of twenty cents per month was to be collected from every seaman, and the money so obtained was to be used to provide temporary relief for sick and disabled seamen. At that time wages were about one-third what they are at present, and the usual rate for the care of a sick man was between two and three dollars a week. As this cost rapidly advanced, it soon became impossible to take care of all sick seamen who presented themselves, and the fund was eked out by annual deficiency appropriations from Congress, which, however, were always insufficient to afford relief to all cases. The facts in the matter were stated to Congress by the Secretary of the Treasury in the fall of 1869, with the recommendation that the tax be increased to sixty cents per month. By act of Congress, approved June 29, 1870, the tax was increased to forty cents per month. The tax is collected by collectors and surveyors of customs of the various ports, and the expenditures from it are made under the direction of the Secretary of the Treasury.

It will be perceived, therefore, that the "marine hospital service", or service for the care of sick and disabled seamen of the commercial marine of the United States, is essentially an accident insurance company, in which the payment of premiums is compulsory, and that the business of the Secretary of the Treasury is to give as much relief as the fund will admit of, and, if it is insufficient to meet all demands (as it is), to select the most urgent and worthy cases to be aided by it. The fund belongs to the seamen,—not to the government. This being the case, if some applicants for relief must be rejected, how should the selection be made? The rule laid down by Mr. Guthrie, Secretary of the Treasury, in 1856, was that no person was entitled to relief "whose disease was incurable, or who, if cured, would be incapable of returning to his employment as a seaman." This, however, manifestly excluded those who most needed relief. In October, 1869, therefore, it was directed that cases of slight and transient disease, and of simple gonorrhœa, should be excluded from relief, while the regulation of Mr. Guthrie was practically done away with.

The modes of affording relief are essentially of two kinds. At a few ports there are marine hospitals, built, owned, and conducted by government. These ports are Portland, Me., Boston, Mass., Cleveland, O., Pittsburg, Pa., Detroit, Mich., St. Louis, Mo., and Key West, Fla. At the majority of the ports sick seamen are cared for by contract made with some hospital or private party, at rates varying from three to eight dollars per week. It will be observed that at the larger ports, where it would be specially advantageous for the government to have its own hospitals, it has none. At New York, Philadelphia, Baltimore, Charleston, Savannah, New Orleans, and San Francisco, the service is conducted by contract. On the other hand, the government had hospitals at Ocrakoke, N.C., Wilmington, N.C., Cincinnati, Louisville, Vicksburg, and Natchez. It has had two washed into the Mississippi River. Some of the above have been sold, and all should be. The objections to the contract system are, first, that sometimes the men are not well treated, but are put on the same footing as paupers; and, second, that they are improperly admitted and unduly retained in hospital for the sake of profit to the contractor. As the best temporary means of checking this evil at the larger ports, physicians have been employed during the past year to look after this matter, and the saving thus effected at New York, New Orleans, and San Francisco may be estimated at about $10,000.

There is little doubt that the system, as applied to ocean-going seamen, is a good one. The tax, in their case, is really so much saved from liquor-dealers and prostitutes; and, as they usually have no fixed homes and no money, it prevents their being a burden on our commercial cities. But with regard to steamboat-men and others employed on inland waters, the expediency of the tax is very doubtful, and it is hard to find arguments in its favor which would not apply equally to railroad-men or miners.

The whole subject is now in a transition state. New regulations have been prepared, and many reforms and changes have been made. For some desirable changes Congressional action will be necessary; but the most important thing at present is to provide for efficient medical supervision of the whole matter by the appointment of a supervising surgeon, as authorized by Congress,—which will probably be done within a short time.

CONTRIBUTIONS TO THE SYME TESTIMONIAL.

IT is no doubt known to many of our readers that a meeting was held in London in November, 1869, by the medical profession, to get up a suitable testimonial in honor of Professor James Syme, Esq., M.D., D.C.L., F.R.S. Ed., on his retirement from the chair of Clinical Surgery in the University of Edinburgh, after a tenure of thirty-six years. At this meeting, which was attended by many of the most distinguished physicians and surgeons of the British metropolis, it was resolved that the testimonial should be in the form, first, of a

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fellowship for the promotion of surgery in the University of Edinburgh, to be called the "Syme Surgical Fellowship"; and, secondly, of a marble bust, to be placed in the University Library or in the hall of the new Royal Infirmary. The sum proposed to be raised for these objects is £2500. In looking over the list of subscribers to the testimonial, it is found to embrace the names of physicians and surgeons in all parts of the British empire, many of them the pupils of Professor Syme, now widely and beneficently disseminating the fruits of his teachings and of his example as a pure, upright, and conscientious Christian gentleman.

In April, 1870, Dr. Charles Murchison, F.R.S., Honorary Secretary of the London Executive Committee, addressed a letter to Professor S. D. Gross, begging him to take some steps to make the movement known among the profession in the United States, adding, "I do not desire large contributions so much as that Mr. Syme's merits should be acknowledged by the distinguished surgeons in America. I am sure that this would be a source of great gratification to him."

In compliance with this wish of Dr. Murchison, a meeting of the surgeons of Philadelphia was immediately held, and a plan of organization adopted, the executive committee consisting of the following gentlemen: S. D. Gross, M.D., Professor of Surgery, Jefferson Medical College; Isaac Hays, M.D., Editor of the *American Journal of the Medical Sciences;* Joseph Pancoast, M.D., Professor of Anatomy, Jefferson Medical College; Washington L. Atlee, M.D.; D. Hayes Agnew, M.D., Professor of Clinical and Demonstrative Surgery, University of Pennsylvania; Edward Hartshorne, M.D., late Surgeon to the Pennsylvania Hospital; John H. Packard, M.D., Surgeon to the Episcopal Hospital of Philadelphia; John H. Brinton, M.D., Surgeon to the Philadelphia Hospital; and J. Ewing Mears, M.D., Secretary of the Pathological Society of Philadelphia,—the latter acting as Secretary.

The circular addressed by the committee to the more prominent surgeons of the country met, for the most part, with a prompt and hearty response; and, although the sum contributed was small, the act shows how warmly the surgical teachers and practitioners of the United States sympathized with the movement of the British profession to do honor to a man whose name and fame are so closely interwoven with the progress of surgery in the nineteenth century. The subjoined letter of Professor Gross, and the reply of Dr. Murchison, will be read with interest:

"PHILADELPHIA, October 1, 1870.

"DR. CHARLES MURCHISON, F.R.S.:

"DEAR SIR:—I have the honor, as chairman of the Executive Committee, to transmit to you a check for £45 7s. 9d., the net proceeds of our collections in support of the 'Syme Testimonial Fund' in the United States. In casting your eye over the list of contributors, herewith sent, you will perceive that it embraces the names of some of the most distinguished teachers and surgeons of this country. The number might, no doubt, have been materially increased if sub-committees had been appointed in the principal cities of the Union, which, however, it was deemed best not to do. Most of the contributions are, in accordance with your suggestion, small, and must, therefore, not be regarded as at all expressive of our appreciation of the valuable services rendered to science and humanity by the illustrious Scotch surgeon whose memory they are designed to aid in perpetuating.

"With best wishes for your health and happiness, and the sincere hope that such acts as these, insignificant as they in themselves are, may serve to strengthen the bonds of good fellowship existing between American and British physicians, I am, very truly, your friend and obedient servant,

"S. D. GROSS."

"79 WIMPOLE STREET, LONDON, W.
"28 October, 1870.

"MY DEAR SIR:

"I have the honor to acknowledge the receipt of your letter dated October 1, enclosing cheque for £45 7s. 9d., the proceeds of the collections in America in support of the Syme testimonial. I regret that my former master no longer lives to read the list of distinguished members of our profession in your great country who have united to do him honor. No honors, I am sure, that could have been conferred upon him would have given him greater pleasure and satisfaction.

"Allow me, in the name of the Committee of the Syme Testimonial, to thank you, and those who have so nobly aided you, for your generous aid to the object we have in view.

"I have taken the liberty of forwarding a copy of your letter to the *Lancet*. Such acts as these ought to be widely known; for they cannot fail to strengthen not only the bonds of good fellowship existing between American and British physicians, but also the ties of relationship between our two countries.

"I am, with great respect, yours most faithfully,

"CHARLES MURCHISON.

"PROFESSOR GROSS, M.D., LL.D.

"P.S.—I enclose a formal receipt, and may add that the list of American contributors will be published in the final report of the committee."

VOLUNTEER MILITARY SURGEONS.

IT is sometimes amusing to note how volunteered aid may be tinctured with a not inconsiderable amount of selfishness. Thus, we find the services of quite a large number of representatives of the medical profession in England offered to and accepted by the Prussians, and probably disposed of in such a way as to conduce to the greatest good of the greatest number of sick and wounded. This end was possibly accomplished most effectually by distributing them among reserve hospitals and to points sometimes remote from the most stirring scenes of action. It is even probable that but few of these medical volunteers were allowed to participate in the labors of the army surgeons who accompanied the extreme advance. Many of them, doubtless, witnessed the results of primary operations several weeks after the wounds were inflicted, and felt aggrieved that no chance for distinguishing themselves as operators was afforded. They forgot that the Prussian medical organization at the front was so thorough that foreign aid seemed superfluous, and that it might be construed as an acknowledgment of weakness to accept it. And yet the complaint now comes to us from English surgeons that the Prussians are reserving to themselves all the best cases, and that English medical talent rarely gets the opportunity of treating such as are possessed of any surgical interest or value. Until we learn definitely whether the volunteer medical assistance from England was humanely offered for the

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relief of the unfortunate and suffering victims of the war, or selfishly for personal considerations, in a comprehensive field for the use of the knife, we shall be at a loss whether or not to condemn the Prussians for their alleged incivility.

If there are many American surgeons at the seat of European war, they must either be thoroughly occupied by attention to their professional duties or be endowed with but little taste for the use of the pen; for scarcely a communication of any value has appeared from them in the journals of this country. As a general rule, the profession in America is sufficiently practical to act with vigor in emergencies, and to fulfil all the imperative duties incident to arduous practice; but it is not given to the concentration of its passing thoughts upon paper. So many able men have, however, gone actively into the medico-military service abroad, that we hope ere long to see published some intelligent *résumé* of current transatlantic medical history, peculiarly interesting at this time to the American medical world, which has so recently been occupied in studying the great lessons of our own civil war.

JUDGE THAYER'S CHARGE

IN THE CASE OF HAIRE vs. REESE.

WE quote from *The Legal Intelligencer* of November 4, 1870, the following charge of Judge Thayer, in the case of Haire *v.* Reese, a full account of which appeared in our last number (see page 73). It seems to us important that the profession at large should be made acquainted with this document, which might serve as a model, both for skill in summing up the essential facts of the case, and for the dignified tone of consideration for the medical profession which pervades it.

WILLIAM C. HAIRE v. JOHN J. REESE, M.D.

1. The implied contract of a surgeon or a physician who attends a patient is, not that he will certainly effect a cure, but that he will use all known and reasonable means to accomplish that object, and that he will attend his patient carefully and diligently. His relation to his patient implies that he possesses, and will employ in the treatment of the case, such reasonable skill and diligence as are ordinarily exercised in his profession by thoroughly educated surgeons or physicians; and, in judging of the degree of skill which he contracts to bring to the service of his patient, regard is to be had to the advanced state of the profession at the time.
2. No presumption of the absence of proper skill and attention arises from the mere fact that the patient does not recover, or that a complete cure was not effected.
3. On the part of the patient, it is his duty to conform to the necessary prescriptions and treatment, if they be such as a surgeon or physician of ordinary skill and care would adopt or sanction; and if he will not, or, under the pressure of pain, cannot, the surgeon or physician is not responsible for injury resulting therefrom.
4. When malpractice, or want of skill or proper attention, is charged against a physician or surgeon, the burthen of proving it lies upon the person who alleges it.

GENTLEMEN OF THE JURY: The plaintiff has brought this action against the defendant, Dr. Reese, for alleged malpractice as a physician and surgeon. The grounds upon which he alleges he is entitled to sustain this action for damages are that the defendant treated him unskilfully for his injuries, and that he did not give that diligent care and attention to his case which it was incumbent on him to extend to him, and which he had a right to expect. That is the question which you are to determine by your verdict.

The history of the case appears, from the evidence which is before you, to be this: On the 2d of February, 1869, the plaintiff, who is by trade a house-painter, was engaged in painting the outside of the House of Refuge, in this city, when the jack upon which he was standing accidentally gave way, and he was precipitated to the ground, a distance of twenty-eight feet, his body striking violently against a fence in its fall. The defendant, who is the attending physician of the institution, was immediately sent for, and he came promptly to his assistance. As soon as he arrived, he proceeded to take up the arteries in the head, which had been cut by the fall, and to stanch the bleeding of his wounds. When that was completed, he proceeded to examine the plantiff's hip, in which he was suffering great pain. The plaintiff groaned with pain under the examination, and the doctor thereupon advised that he should be removed at once to his own home, where he could be better provided for, and where a more thorough examination could, with greater facility and less pain to the patient, be made. At the special request of the plaintiff, he consented to attend him, and went in advance of the plaintiff to his home, in a distant part of the city, in order to prepare his family for the bad news which awaited them, and to make proper preparations for the reception of the patient. When the latter arrived, he was carried, by the doctor's directions, into the sitting-room and laid carefully upon a bed. The doctor then etherized him, in order to enable him to endure the examination to which he was about to subject him. He then proceeded to make a thorough examination of the injured parts, and, contrary to his own expectations, as he says, found, after making this critical examination, that there was neither fracture nor dislocation of the bones. After administering an anodyne to him, and directing an anodyne liniment for the hip, he left him for the night. The next day he visited him again, and made another careful examination of the hip, according to the doctor's testimony, but again found no evidences of fracture or dislocation. He prescribed liniments and anodynes, and directed him to be kept in a quiet condition. The doctor continued to visit him daily for a considerable time, making twenty-one visits in all. On the 24th of February, about three weeks after the accident, at Dr. Reese's suggestion, Dr. Agnew was called in to a consultation. He came, and made a thorough examination of the injured part. He resorted to every means known to surgery to ascertain if there had been a fracture. You will recollect the details of that examination, given to you by Dr. Agnew himself. The patient was first examined in a recumbent position. The parts were carefully manipulated and turned about; but there was no crepitation,—that is, no sound of grating of bones,—which is usually detected immediately by the practised ear of a skilful surgeon, where a fracture has occurred. The limbs were carefully measured and compared with each other; measurements of various kinds, and in different directions, were made, to ascertain whether the injured leg had undergone any shortening. The patient was then placed in an erect posture and again examined. His leg was swung backward and forward. In short, after subjecting the limb to all the tests usually applied in such cases, Dr. Agnew, as he has testified, was convinced that there was neither fracture nor dislocation. Dr. Agnew has stated in his testimony, in view of this thorough examination to which he subjected the plaintiff, that if there then existed a fracture it could not be discovered by any human means. Dr. Reese made his last visit to the plaintiff on the 10th of May. For the professional service which he rendered he has never received a dollar. On or about the 6th of August following, the plaintiff called upon Dr. Agnew at his office. Dr. Agnew then observed that there had been some shortening of the leg. When asked by Dr. Agnew when that shortening had commenced, he replied that "it was after he had got up to go about on crutches." Dr. Agnew advised him to get a high-heeled shoe, and to dispense with the crutches. He then went away. He rewarded Dr. Agnew for his services by bringing a suit against him also. Subsequently he went to see Dr. Gross, at the Jefferson College clinic, who prescribed an ointment for his leg; whereupon the plaintiff accused him of having poisoned him. He went also to see Dr. Duffie, who advised him to throw away his crutches and to get a high heel to his shoe. While Dr. Reese was attending him, he consulted other persons without informing him of it, and applied to his leg various nostrums which they recommended. He now charges Dr. Reese with the shortening of his leg, and seeks to make him responsible for it. You are to decide whether his charge is just and true or not.

Gentlemen of the jury, before I refer to the evidence in the cause, I will direct your attention to certain principles of law which are applicable to such investigations.

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The implied contract of a surgeon or a physician who attends a patient is, not that he will certainly effect a cure, but that he will use all known and reasonable means to accomplish that object, and that he will attend his patient carefully and diligently. His relation to his patient implies that he possesses, and will employ in the treatment of the case, such reasonable skill and diligence as are ordinarily exercised in his profession by thoroughly educated surgeons or physicians; and, in judging of the degree of skill which he contracts to bring to the service of his patient, regard is to be had to the advanced state of the profession at the time. The defendant in this case was bound to use reasonable skill and diligence to effect a cure; and reasonable skill and diligence means such skill and diligence as educated and faithful surgeons or physicians ordinarily employ.

No presumption of the absence of proper skill and attention arises from the mere fact that the patient does not recover, or that a complete cure is not effected. God forbid that the law should apply any rule so rigorous and unjust as that to the relations and responsibilities arising out of this noble and humane profession! The medical man who is called to attend a patient undertakes to possess such knowledge and skill as are usually and commonly possessed by educated physicians, and to apply that skill and knowledge with all due diligence and care for the benefit and advantage of the patient. If his performance comes up to that standard, he has discharged his duty and is not responsible for results. On the part of the patient, it is his duty to conform to the necessary prescriptions and treatment, if they be such as a surgeon or physician of ordinary skill and care would adopt or sanction; and if he will not, or, under the pressure of pain, cannot, the surgeon or physician is not responsible for injury resulting therefrom.

When malpractice, or want of skill or proper attention, is charged against a physician or surgeon, the burthen of proving it lies upon the person who alleges it. In the absence of satisfactory proof to establish such a charge, the presumption is that he was competent for the task which he undertook, and did his duty to the best of his ability. This is the rule of common sense, and the rule of the law upon this subject. The burthen of proof, therefore, in this case, as in all similar cases, is upon the plaintiff. You are not to rush to conclusions detrimental to the reputation and interests of the defendant without competent proof. You are to decide the case by the evidence. You are sworn to give a true verdict according to the evidence. Your consciences must be satisfied by the evidence that the plaintiff's case is proved, before you can be justified in finding a verdict against the defendant. And I will add that it is your duty to weigh the evidence carefully, and to decide the cause according to the weight of the evidence.

Having thus pointed out the rules of law which are applicable to this inquiry, I will now proceed to make some references to the evidence which has been given, reminding you, at the same time, that you are the exclusive judges of the facts, and with you must ultimately rest the responsibility of deciding the cause.

The charge made by the plaintiff, as he has attempted to maintain it by the evidence, is that the defendant mistook the nature of his injury. He says that his thigh-bone was fractured, whereas the defendant assured him that it was not, and treated him as if it were not, the consequence of which was, as he alleges, the shortening of his leg. The proof upon which he relies to show that there was a fracture is, in the first place, the evidence of certain witnesses; and, in the second place, he says that the fracture is proved by the shortening itself. Now, it is apparent, from the testimony of all the surgeons who have been examined,—as well the plaintiff's as the defendant's witnesses,—that, in consequence of an injury such as the plaintiff received, shortening of the limb may result either from a fracture of the bone or from what is technically called *interstitial absorption*,—that is to say, the absorption of the extremity or neck of the femur, or thigh-bone, a result frequently arising from a violent contusion. If you believe the leg was shortened, then it will be proper for you to inquire whether it was the result of an actual fracture, or of absorption taking place in consequence of a contusion; because you will observe that unless there was a fracture the plaintiff's allegation of mistake or neglect on the part of the defendant in not ascertaining that fact is not made out. Let us, therefore, examine the evidence upon this point.

The plaintiff himself says, in his testimony, very positively that the bone was fractured. Now, it is for you to say how much weight is to be given to that statement, in view of the other testimony in the case. You will consider whether he could probably determine that point with as much certainty as the surgeons who professionally examined the limb. You will consider whether his assertion upon this point is of as much value as the testimony of the surgical experts who examined him. To me it appears a question much more difficult to be decided with certainty by the patient himself than by those who, from long experience and education, are accustomed to ascertain such facts by the scientific tests which they are accustomed to resort to in order to determine it. But the value of his testimony I leave entirely to you.

The first witness he called upon this point to sustain his own assertion was Dr. John Hirst, who is a graduate of the College of Surgeons of Edinburgh. He testified that he examined the plaintiff about two years after the accident occurred. He told him that he could do nothing for him; that he had no doubt that his case had been correctly treated, from the character of the gentleman who had attended him. He casually expressed the opinion, he says, that the leg had been fractured in the neck of the thigh-bone, and he formed that opinion, he says, from the shortening of the limb. According to his testimony, he based his opinion on that circumstance and what he had heard of the history of the case; he did not measure the limb. He further said that concussion may induce disease of the articulating head of the thigh-bone, resulting in interstitial absorption; and that will occasion a shortening of the limb. He further said that he thought the shortening was owing either to fracture or interstitial absorption. As a general rule, the limb would be very soon shortened by a fracture after the injury was received, but if shortened by absorption, the shortening would come on gradually. He also said that if he examined a patient and found that there was neither crepitation, inversion of the limb, nor shortening, he could not say there had been a fracture. Dr. Hirst does not appear, by the evidence, to have examined the plaintiff by means of the usual scientific tests described by the other surgeons. He looked at it two years after the accident, and gave a casual opinion, as he himself expresses it, founded upon a comparison, by the eye, of one leg with the other, and upon what he had heard of the history of the case. That appears to have been all the examination he gave it. It is for you to settle the weight and value of his testimony on this point.

The next witness called by the plaintiff was Moses Stevenson, who says he graduated in medicine in 1870, after studying two years. He says he examined the plaintiff's leg last winter, and believes that it had been fractured. I do not consider it worth while to dwell upon the testimony of this witness. You will recollect the exhibition which he made upon being cross-examined, saying, among other things, that "the head of the femur may be *crepitated* by absorption." In my judgment, his testimony is not worth considering, and was in the highest degree discreditable to himself. I dismiss him, therefore, without further comment.

The next witness called by the plaintiff was Dr. Joseph D. Scoles, whose testimony appeared to me to be both clear and candid. He says that he formed the opinion that the hip-bone had received an injury which occasioned the shortening of the limb; that this shortening may have been caused either by fracture or absorption, and that it is impossible for him to say which.

I have now given the substance of the whole of the plaintiff's testimony upon this subject of fracture or no fracture.

On the part of the defendant, Dr. Reese (the defendant) testified in great detail to the nature of the examination to which he had subjected the plaintiff immediately after the happening of the accident. I will not take up your time by going over it, for I am sure you will recall it. And after completing that examination, which appears, by his own statement, to have been very carefully and deliberately made, he came to the conclusion that there had been neither fracture nor dislocation.

Dr. D. H. Agnew, the distinguished professor of operative

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surgery in the University of Pennsylvania, testified that he examined the plaintiff's limb about three weeks after the accident, and applied every test known to surgical practice to ascertain whether there had been a fracture, and was clearly of opinion that there was neither fracture nor dislocation. You will remember the description he gave you, at considerable length, of that examination, and of the various methods resorted to by him to determine the fact. He said that if there was a fracture at that time it could not be discovered by any human means. He says, moreover, after listening to the details of the treatment of the patient by Dr. Reese, that it was in all respects skilful and proper.

Dr. Gross, the eminent Professor of Surgery in Jefferson College, and a gentleman of great experience in the profession, testifies that he examined the patient at the close of a clinic, and came to the conclusion that the injury to the leg was the result of severe contusion. He further says that, if the bone had been fractured, the shortening of the limb would, beyond all question, have taken place within twelve or fifteen days after the accident. He also corroborated, to the fullest extent, the opinion of Dr. Agnew in regard to the skilful and judicious character of the treatment given to the plaintiff by Dr. Reese.

Dr. Duffie, also called as a witness by the defendant, and having also examined the plaintiff some time since, was distinctly of opinion that it was a case of absorption of the thigh-bone, a result which, he says, no remedies known to surgery can cure.

Dr. John H. Brinton, a well-known surgeon of long and large experience, testified, after hearing at length the treatment to which the plaintiff had been subjected by the defendant, that, in his opinion, it was perfectly correct and judicious, and said he knew of no other treatment for such a case.

The testimony of Dr. R. J. Levis was to the same effect. He says that the treatment was skilful and proper.

All the surgeons who were examined agree that, if there was no fracture, the treatment was perfectly proper; and they all agree that the only evidence of fracture was the shortening of the limb, and that shortening ensues with equal uniformity from absorption—the consequence of contusion—as from fracture, the only difference being that in the former case it comes on at a much later period in the history of the case than in the latter. You have then, on the one side, the positive statement of the plaintiff and the opinion of Dr. Hirst, founded upon an examination certainly not critical in its character, made two years after the accident, and upon what he had heard about the case. You have, upon the other, the opinions of Dr. Agnew, Dr. Gross, Dr. Brinton, Dr. Duffie, Dr. Packard, Dr. Levis, and Dr. Reese, the defendant.

You have also the important fact that there is no evidence that any shortening took place for a considerable period after the accident. Dr. Agnew is positive that there was no shortening when he first examined the plaintiff about three weeks after the accident, and that he did not observe that it had taken place until the plaintiff came to his office in August, about six months after the accident.

You ought to decide the case according to the weight of the evidence. If you are of opinion that the plaintiff's leg was not fractured, I do not see that there is any evidence that the case was not properly treated by Dr. Reese. I have a right to say, and I conceive it to be my duty in this case to say, that I see no satisfactory evidence that the treatment of Dr. Reese was not, in all respects, skilful, wise, humane, and proper. But I leave all the evidence to you, and you will decide for yourselves.

If, after looking over the whole case and weighing all the evidence, and applying the rules of law regulating his responsibility, to which I referred in the commencement of my charge, you conscientiously come to the conclusion that the defendant was guilty of any negligence or want of ordinary care and diligence resulting in injury to the plaintiff, of course you will not hesitate to say so by your verdict. But if, on the contrary, you come to the conclusion that the plaintiff's complaint is altogether unfounded, then it concerns not only the interests of the parties in the present cause, and not only the interests of public justice, but also the established medical fame of this city (a fame established by many examples of men great and distinguished in this profession, who have here lived and labored and died), that you put an end, so far as you can, to experiments, by unjustifiable lawsuits, against skilful, attentive, and humane physicians.*

CORRESPONDENCE.

THE THERAPEUTIC USE OF RATTLE-SNAKE-VENOM.

To the Editor.

My friend Dr. Horatio C. Wood has called my attention to the following letter, addressed to Dr. Coxe, and published in his Dispensatory, 1827, p. 664. Dr. Wallace's "provings" of Crotalus venom seem to me worthy of preservation. Yours,

S. Weir Mitchell.

"Fauquier, Virginia, 1824.

"After a review of animal, vegetable, mineral, and aerial poisons, relative and positive, in their immediate and remote effects on the three grand functions, animal, vital, and natural, —seeing that the horse and dog are said to improve on arsenic, that it fails to poison the falco-ossifragus; seeing that swine devour, in safety, rattlesnakes, regardless of their venomous bites; and that carbonic acid gas, deleterious in the lungs, is innocent—nay, salutary—in the stomach, I made myself *et alia* subjects of experiments with the poison of the rattlesnake (*Crotalus horridus*). My moral views of men, principles, and things forbade me pushing these experiments on others, whose safety is my professional study (not the wild play of philosophic fancy), so far as I extended them on myself. This animal substance is the true Samson of the materia medica, and I anticipate the time when rattlesnakes will be reared for medicinal purposes, as the poppy and palma christi are now. Old scholastic dogmas fly before modern science as chaff before the wind. I well remember when there was as much ceremony in giving a dose of calomel as christening a child in a country church. The effects of this poison are wonderful, as ethereal delights of long continuance (say for days), whereas the effects of opium, hyoscyamus, and lactucarium soon fade away; it reddens the blood, and makes the faded cheek to glow with the rose of youthful health; it is a great corrector of morbid resin of bile; it drives away typhus, and replaces the mind on her native throne to admire the beauties of creation and inspire the soul with physico-theology.

"N.B.—I mixed, by friction, in a glass mortar and pestle, the bags, venom and all, taken from the teeth of a large and vigorous rattlesnake, with some cheese, and then divided the mass into one hundred pills, of which I occasionally took, sometimes one, at other times two, three, or four pills a day. A general dropsy succeeded the first state of heavenly sensations, which has not, even at this day, fully gone off, being even now, March, 1827, subject to swellings in the evening. The diseases of the lymphatic and arterial systems are never benefited by the use of rattlesnake-poison, but the nervous and muscular systems are speedily roused into action; palsy is much benefited; old rheumatisms are removed or relieved; the passions of the mind are wonderfully excited; delirium in typhus fever, attended with mutterings (typhomania), is almost immediately removed, and a serene mind, expressive of pleas-

* It will be remembered that the jury, without leaving their box, returned a verdict for the defendant; the costs to be paid by the plaintiff. —Ed.

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ure, follows. Melancholy is quickly changed into gay anticipations; old sores are uniformly injured; on one occasion the old cicatrix opened and was difficult to heal afterwards. An ideot (*sic*) became improved in intellect.

"JAMES WESTWOOD WALLACE."

NOTE ON FIBRIN.

TO THE EDITOR OF THE MEDICAL TIMES.

SIR:—The views of Alexander Schmidt concerning fibrin-formation by the admixture of blood-serum with the liquid of hydrocele have excited so much attention that it may not be uninteresting to trace out the fate of the same theory in the original investigations of Dr. Andrew Buchanan, of Glasgow. This gentleman published his observations upon the animal fluids in the *London Medical Gazette*, vol. xviii., 1836, and arrived at the same conclusions in regard to the production of fibrin that Schmidt has since promulgated, viz., that fibrin is formed by the mixture of serum of the blood with that of serous effusions. But we find him explaining the method of its production in a very different manner eight years afterwards. In 1844 he stated that fibrin is formed by the aggregation of minute molecules, which molecules originate in the mixed serous liquids. In other words, he considered the cyto-blastema of Schwann and Schleiden to be nothing more than a mixture of membranous and sanguineous serum, which had the power of producing these molecules spontaneously. As he and others have demonstrated these molecules to be always present before fibrin appears, and as spontaneous generation is out of the question, we must adopt the views of Carpenter and Beale, and regard these molecules as masses of protoplasm or germinal matter, which can only come from pre-existing germinal matter, but which, on account of their minute size, had been overlooked when the serous liquids were examined. The absence of fibrin in both of the serous liquids has not been sufficiently well proved to enable us to state positively that it is produced by commingling them. If both the serum and the liquid of hydrocele be exposed to a temperature of 150° F., which destroys the coagulating power of fibrin, and then mixed, if coagulation occurs it is proof positive of Schmidt's view; but I believe that this has never been done. The liquid of hydrocele, according to Paget, often coagulates spontaneously when removed from the body, so that fibrin must be present, and the addition of blood-serum only *hastens* the formation of the clot, and does not produce fibrin, as has been supposed.

There is a large field here open for experimental inquiry.

LOUIS S. STILLÉ.

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TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting held October 26, 1870, 8 P.M., Dr. W. H. Pancoast, President, in the chair, a paper was read by Dr. James Cummiskey on the relation of chorea to rheumatism, which will appear in a subsequent issue.

Dr. Burns had seen a number of cases of chorea, but had observed no relation between it and rheumatism. The spine is affected in both. Counter-irritation to the spine is useful in both. There is simulated anæmia in chorea, but not in rheumatism.

Dr. Lee thought the embolism theory was a plausible explanation of the relation between chorea and rheumatism. The theory of Trousseau, that this relation was due to a morbid constitution of the blood, he did not consider tenable. If the cause were active through the blood, the nervous system would be more generally affected. The brain would be affected; this is wanting in true chorea. The spinal cord would be interfered with alike on both sides, and the movements would continue during sleep. In chorea the clonic contractions cease during sleep, and are frequently unilateral. In chorea you get no reflex movements on touching the sole of the foot; in disease of the spine the response is violent. Embolism probably does not occur in the senso-motory ganglia alone and nowhere else in the brain. Clots may not produce any perceptible effect. Very small clots, and even large ones, may be washed away; they do not necessarily produce sphacelus. The frequent occurrence of chorea in childhood seems to indicate its location in the senso-motory ganglia, as these ganglia are particularly prominent during this period of life.

Dr. Wittig said the one was a disease of the motor nerves, and the other of the fibrous tissues. Chorea, through its effect on the nervous system, might cause the retention of matter which would produce rheumatism.

Drs. O'Hara, Hamilton, and Burns thought that acute rheumatism occurred in the plethoric more commonly than in the anæmic.

At a conversational meeting held November 9, 1870, at 8 P.M., Dr. W. H. Pancoast, President, in the chair, Dr. L. K. Baldwin narrated a case of cancer of the vagina, which will be found in full at page 93.

Dr. A. H. Fish had seen a case in which the cancer was confined to the vagina where the disease returned in three or four months after removal; in a case of cauliflower cancer of the uterus there was no pain or offensive discharge. The case terminated in fifteen months.

Dr. Pancoast had a similar case, involving the uterus and vagina. In these cases, he said, death was generally from exhaustion. He suggested the use of the écraseur in the removal of the growths, and preferred the chloride of zinc as a disinfectant.

Dr. Burns thought the sudden death in Dr. Baldwin's case might have been from embolism.

In answer to a question by Dr. Stebler, Dr. Baldwin stated that the father of his patient had died from cancer of the stomach.

REVIEWS AND BOOK NOTICES.

LUNACY: ITS PAST AND ITS PRESENT, by ROBERT GARDINER HILL, F.S.A. Pp. 109. London, 1870.

Dr. Hill's object, in this little book, is to vindicate his claim to the distinction of having been the first to dispense entirely with restraints in a hospital for the insane,—a distinction not so fully recognized as it should have been. Most people probably suppose it belongs to Dr. Conolly; and Sir James Clark, in his memoir of his departed friend, claims it for him in unqualified terms. Dr. Conolly himself attributed this great step in the management of the insane to Dr. Charlesworth, who was the visiting physician at the Lincoln Asylum, while Dr. Hill was the resident physician. The latter has shown very satisfactorily that although the amount of restraint in that institution had been steadily diminishing under the supervision of Dr. Charlesworth, the total abolition was effected by him, Dr. Hill, and that he is entitled to all the credit, such as it is, which belongs to it. The extent to which restraint was once used, at no very distant period, almost passes the bounds of belief. From a table given by Dr. Hill, it appears that the total number of patients in the Lincoln Asylum in 1830 being 92, 54 were more or less restrained; that the whole number of instances of restraint were 2364, and the total number of hours passed under restraint were 27,113. In 1838 these tremendous figures were reduced to zero. Dr. Conolly signalized his entrance upon this special field of labor at Hanwell by adopting the practice he had witnessed at Lincoln, of total non-restraint. The large size of the hospital, con-

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taining then, if we remember rightly, nearly 1000 patients, the distinction achieved by Dr. Conolly as a writer on mental disease, and his connection with the medical press, all combined to secure for the experiment a kind of *éclat* that strongly contributed to its further trial in other hospitals, and its final almost universal adoption in England.

Here, as is often the case with reforms that make *ad captandum* appeals to our benevolent instincts, there was a rapid passage from one extreme to the other; and such has been the force of popular feeling on this subject, that we are quite uncertain how far non-restraint is approved by those who use it. For ourself, we do not doubt that the private conviction is often at variance with the public practice. The system of non-restraint has been on its trial thirty-three years, and the result is that it has been adopted on the continent in hardly a single instance, to our knowledge, not at all in this country, and not universally in the British dominions. In the latter there are indications of a reaction in public sentiment, and the press is inquiring if the numerous and serious casualties reported by no less an authority than the Royal Commissioners in Lunacy are a legitimate consequence of the total abolition of restraint. In the *Pall Mall Gazette*, a few months since, there appeared an article on this subject that may be taken as a very significant sign of the times. In adverting to the management of some criminal patients in the Broadmoor Asylum, which had been complained of by the advocates of non-restraint, the writer says, "Now, it seems to us that, so far from no attempt being made at Broadmoor in the direction of indulgence and non-restraint, that system has been carried out further than humanity demands or prudence suggests. Even the other patients are afraid of associating with these men; and it appears almost fatuous for the Commissioners to go on year after year recommending that these lunatic convicts should be allowed a few more chances for killing or maiming the wardens and medical officers of the hospital." Such remarks, in such a quarter, afford a cheering sign that the reign of illusions is about yielding to that of common sense and true humanity.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA, at its Twenty-First Annual Session, held at Philadelphia, June, 1870. Sixth Series, Part I. Published by the Society. Philadelphia: Collins, Printer, 1870.

The Transactions of the State Medical Society are made up chiefly of contributions from a class of physicians who but seldom write for the journals; for to the country practitioner is wanting the incentive to publication which his city brother finds in the constant appearance of a medical periodical, and these volumes are looked upon by many as the only media of communication with the profession. The purely scientific portion of the present volume—unfortunately only a very small part of it—is composed principally of reports of cases, all of them, with the exception perhaps of Dr. Gobrecht's, of only ordinary interest, while, on the other hand, the papers on general subjects are few and short. This is to be regretted; for the contents of the volume demonstrate that there are physicians practising in the interior of the State whose education and habits of close observation fit them for literary work of this kind. If the communications were upon subjects such as the modifying influence exercised by the soil and climate of different localities in this State upon disease, its treatment and prognosis, the series of which this volume forms a part would be infinitely more valuable than it is at present.

In the case reported by Dr. Gobrecht, above alluded to, the poisonous properties of strychnia appear to have been neutralized by the chloroform in which it was dissolved. Seven-eighths of an ounce of chloroform, containing, it was thought, fifteen grains of strychnia, were swallowed without the production of any other result "than complete and prolonged anæsthetization (*sic*) and some temporary numbness". It will be recollected that Dr. J. Hughes Bennett (*British Medical Journal*, October, 1870, p. 356) has recently demonstrated experimentally that if chloral be hypodermically injected after the administration of strychnia, no spasms will take place, but that, on the contrary, the animal will fall into a profound sleep.

A SYSTEM OF PRACTICAL SURGERY. By SIR WILLIAM FERGUSSON, BART.

This fifth edition of a well-known book is of special value, containing, as it does, the matured views of one who has practised surgery for forty years, and whose position is in the front rank of living surgeons.

Decided independence of thought, with great tolerance for the opinions of others, is stamped on every page. The views advanced are almost entirely practical, and eminently conservative, in the modern acceptation of that term. As a system it is incomplete, not professing to supply preliminary knowledge; and the book is therefore unfit to place in the hands of a beginner, being principally occupied with the operations and mooted points of surgery. Had it been entitled "Observations," rather than a "System," some chapters, treating superficially of primary doctrines, might have been omitted without detracting from the value of the work.

It is pleasant to notice that the work done by American surgeons is not unknown to our author, and to hear him mention as friends names time-honored among us. We are rather surprised to find no notice taken of the reduction of luxations by manipulation, nor of extension by a weight in the treatment of fractures of the thigh. From the results of his experience, the author does not hesitate to give it as his deliberate opinion that eight out of ten cases under thirty years of age, who formerly would have been treated for knee-joint disease by amputation of the thigh, are now best treated by excision of the joint.

As might be expected, the chapters upon resections and lithotomy are epitomes of the most advanced views on those subjects, and will be read with especial satisfaction as emanating from the hand of a master.

Though compelled to dissent from some of the opinions advanced, we feel confident that the reader of this volume will find the style pleasant and the matter instructive.

KRITISCHE UND EXPERIMENTELLE UNTERSUCHUNG DES NERVENEINFLUSSES AUF DIE ERWEITERUNG UND VERENGERUNG DER BLUTGEFAESSE. Preisschrift von Gustav Roever. Rostock, 1869. (Critical and Experimental Researches on the Influence of the Nervous System in the Dilatation and Contraction of the Blood-vessels. Prize Essay by Gustav Roever.)

We commend this brochure to all medical thinkers, as containing all that is at present known about the vaso-motor nerves, as being well written, well thought over, and thoroughly experimentally elaborated.

The most interesting point in it is the discussion of the *Nervus depressor* of Cyon and Ludwig.

This nerve arises sometimes by one, sometimes by two, roots, the chief root coming from the vagus, mostly in the angle made by the origin of the superior laryngeal, the other (often absent) from the sympathetic in the neck. When this nerve is cut and its upper end galvanized, there is produced immediate diminution in blood-pressure and frequency of heart-beat, the force of heart-beat remaining the same. The diminution of blood-pressure appears to be due to the enlargement of the arterial system, owing to a depression of the vaso-motor nerves. It is not owing to any action on the heart; because the result is unaffected by division of the vagi and complete separation of the heart from the cerebro-spinal and sympathetic nervous systems. The diminution of the number of the beats does not occur if the vagi be previously divided. The depressor is therefore an afferent nerve of a vaso-motor inhibitory centre, and appears to be especially connected with the lower half of the body; for no action was apparent when the spinal cord had been previously divided at the third dorsal vertebra.

PHYSICIAN'S PRESCRIPTION RECORD. S. W. Butler, M.D. Philadelphia, 1870.

This handy little volume is an attempt to supply a great need. All physicians have felt the importance of preserving a copy of the prescriptions given to patients applying for advice at their office, and yet but few take the trouble to do so systematically. This Prescription Record will greatly facilitate this desirable practice.

BOOKS AND PAMPHLETS RECEIVED.

A Sketch of the Early History of Practical Anatomy (Introductory Address). By W. W. Keen, M.D. 8vo, pp. 31. Philadelphia, 1870.

Syphilis of the Nervous System. By E. L. Keyes, M.D.

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Reprinted from the *New York Medical Journal*. 8vo, pp. 44. New York, 1870.

Transactions of the American Medical Association. 8vo, pp. 612. Philadelphia, 1870.

Transactions of the Medical Society of the State of West Virginia. 8vo. Wheeling, 1870.

Partial Paralysis from Reflex Irritation caused by Congenital Phimosis and Adherent Prepuce. By L. A. Sayre, M.D. Extract from *Transactions of American Medical Association*. 8vo, pp. 9. Philadelphia, 1870.

Flower (W. H.). Introduction to the Osteology of the Mammalia. With numerous Illustrations. 12mo, 1870. MacMillan & Co., New York.

GLEANINGS FROM OUR EXCHANGES.

THE TREATMENT OF ULCERS AND OTHER GRANULATING SURFACES BY TRANSPLANTATION OF SKIN.—In the *Medical Times and Gazette*, October 29, may be found a paper on Skin-Grafting, by Mr. Dobson, of Bristol, and in the same issue, as well as in the *Lancet* for October 22, are recorded the results of this most important addition to modern surgery, as obtained in many of the London hospitals. This ingenious method for hastening the healing of ulcers which have resisted other methods of treatment was the invention of M. Reverdin, and it was first tried in London at St. George's Hospital last May by Mr. Pollock, since which time it has been widely adopted, and with unexceptionably favorable results when employed in suitable cases. The procedure is exceedingly simple, and may be thus described. Having waited until the wound or ulcer has assumed a healthy granulating appearance, a bit of the whole thickness of the skin, say the size of half a split pea, but without any of the subcutaneous cellular tissue, is pinched up from the inner side of the arm, and removed with a sharp scalpel or scissors curved on the flat. If the granulations are perfectly healthy and florid, the little bit is then pressed flat, with its under surface upon the granulations, and kept firmly applied by a strip of isinglass plaster passed across the ulcer. This form of plaster is useful in permitting the surgeon to see through it and watch the fate of the graft. Should the granulations be old and feeble, it will be better to follow the plan of Mr. Dobson, who divides on his thumb-nail the small bit of skin into five, seven, or nine pieces, as the case may be. He then makes a superficial incision into the granulations, waits until the slight bleeding has ceased, and inserts the grafts on the point of a needle. Care must be taken not to make too deep an insertion, or the graft may be entirely enveloped, and will be longer in showing itself. The plaster may be left for five days or a week, by which time the graft will have become firmly attached to its new bed, and perhaps, if very small, imbedded and hidden among the granulations. It will soon, however, become again apparent, and then, with a lens, the characteristic blue line of growing cicatricial tissue will be discerned surrounding it.

As regards the behavior of these minute portions of skin in their novel situation, Mr. Dobson, speaking generally, says, "At about the second day the cuticle begins to separate; by the fourth day only a faint pale spot marks the insertion, or there may be no evidence of it left at all; by the sixth day a faintly vascular tuft of granulation appears. This becomes glazed, and in a few days more the usual covering of cicatrix is formed. The patch is usually circular, and presents slight ridges, and continues to increase in size circularly until it reaches its maximum of growth; for it has a maximum of growth. I have never seen a patch larger than a florin, and I have now seen large numbers of them. I should say that their average growth will not exceed the size of a sixpence."

The size of the piece of skin grafted seems to be somewhat a matter of fancy. Mr. Dobson, for example, prefers to divide a bit not larger than half a split pea into from five to twelve pieces, and dot these over the surface of the granulations in such a manner and sufficiently close together as to speedily subdivide the original sore by their coalescence. At St. George's Hospital, Mr. Pollock uses minute portions, not exceeding millet-seeds in size. Mr. Mason, of the Westminster Hospital, prefers pieces of the size of a canary-seed. At the Charing Cross Hospital, Mr. Bellamy employs very small grafts. At the University College Hospital, Mr. Heath uses small bits, the largest being the size of a split pea; while Mr. Lawson has treated most successfully, at the Middlesex Hospital, two ulcers of the leg with grafts as large as sixpenny pieces.

As illustrations of this practice, we subjoin the following cases. The first eight are from the *Lancet*, and were under the care of Mr. Mason. The first case was that of a woman who for three years had an ulcer of the leg, measuring about four inches by three. Three pieces of skin of the size of a canary-seed were snipped from the front of the upper arm and simply placed on the ulcer, and retained in position by means of a strip of transparent plaster, and over this water-dressing and a bandage were applied. At the end of a month the ulcer had nearly healed, each of these pieces having in a fortnight attained the size of a fourpenny piece.

The second case was that of a man with a flabby-looking ulcer as large as the hand, situated in the groin. Four small pieces from the front of the upper arm were grafted. Three failed to grow, and the fourth, after one month, was only of the size of a pea.

The third subject was a woman with an unhealthy ulcer of the leg, extending nearly all around the limb. Four pieces were grafted, and they all failed to grow.

The fourth, a woman with an ulcer of the leg of four years' standing and two by three inches in size. Two pieces of skin were grafted, and in three weeks measured each a quarter of an inch in diameter.

The fifth, a man of middle age, with an ulcer of the leg, four by three inches in size, of nearly four years' standing, which was sloughing at the time of admission. Charcoal and linseed poultices were first applied, and the wound soon showed fairly healthy granulations, on which four pieces were grafted, and on the strips being removed, four days later, they were all found to have adhered. When seen eleven days after the operation, they were spreading rapidly.

The sixth, a girl, aged twenty, with a flabby ulcer on the thigh, of eight months' standing. Two pieces were grafted, with good result. In the seventh and eighth cases there were smaller ulcers, in which one piece only was grafted. They rapidly recovered.

In the second and third instances the failures arose from the trial being made upon unhealthy ulcers. A graft may, moreover, fail from some want of delicacy or from carelessness in the manipulation; for it is just one of those procedures which, though simple and easy of execution, require care and attention to minute details.

A typical example of healing of a large indolent ulcer from a burn occurred in the practice of Mr. Dobson. A lad, aged fifteen years, had received a fearful gunpowder burn of the abdomen, which, after the greater portion of the resulting wound had cicatrized, left a granulating surface eight inches long by five wide, which had for nearly six months refused to heal. Altogether, seven pieces of skin were removed from the inner side of the arm, which by subdivision yielded about forty grafts, by far the greater number of which lived in their new home. They were inserted pretty closely together, and in twelve weeks cicatrization was complete. In the following case, from the *Medical Times and Gazette*, a large graft was used:

"A man, aged twenty-four years, had been suffering from ulcers on the legs for three years, the sores sometimes healing over, but they had never been so bad as at the date of admission. (Middlesex Hospital.) On September 22, upon one of these ulcers, which had now assumed the appearance of a healthy granulating sore, two and a half inches square, Mr. Lawson grafted a bit of skin nearly as large as a sixpence, taken from the arm. During the first week the fate of the bit seemed uncertain, but by the seventh day it was clearly living, and more vascular-looking than before, and it thenceforward continued to spread rapidly. When we saw the man again, on October 18, the ulcer had completely healed, but the transplanted skin was readily discernible as a slightly-elevated island of natural-looking integument in the midst of a surface of glazed cicatricial tissue."

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CHLORAL HYDRATE.—Dr. R. Wirth (*New York Medical Journal*, November, 1870) reports a case of tetanus successfully treated with this drug. The man was 32 years old, and had suffered from a scalp-wound, which had cicatrized nearly a month previously, but the affection was probably idiopathic, caused by a wetting received when in a profuse perspiration.

DIGITALIS.—Dr. Blair D. Taylor, of Bellevue Hospital (*New York Medical Journal*, November, 1870), reports a case of obstructive regurgitant murmur of both valves of the left heart, complicated with intense congestion of lungs, in which, on several occasions, the pulse having been lost at the wrist rapidly reappeared after exhibition of large doses of tincture of digitalis (ʒss, repeated in 21 minutes).

CHEMICAL COMPOSITION OF BONES OF GENERAL PARALYTICS.—In this paper Mr. I. Campbell Brown (*Chemical News*, October 28, 1870) gives the following table of results obtained by himself, compared with the analyses of healthy bones by Valentin and Von Bibra:

Constituents.	Ribs of General Paralytics.				9 mos. fetus.	Osteomalacia.	Adult tibia.	Adult ribs.
	1	2	3	4	5	6	7	8
Phosphoric acid,	23.52	22.85	19.09		23.31	16.89	24.24	25.95
Lime	29.57	28.54	25.25		28.98	22.20	32.98	34.43
Magnesia and alkalies	0.41	0.43	0.37		0.36	1.05	1.37	1.67
Carbonic acid .	1.55	1.29	2.09		1.10	1.71	3.37	2.90
Total inorganic constituents	55.05	53.11	46.80	49.46	53.75	41.85	61.96	64.95
Total organic constituents	44.84	47.02	53.05	50.54	47.15	58.16	38.02	33.97
	99.89	100.13	99.85	100.	100.90	100.01	99.98	98.92

On this the doctor remarks that, so far as can be judged from so few cases, the ratio of organic constituents is much greater, and that of lime to phosphoric acid is distinctly less, in the ribs of paralytics than in those of healthy adults, whilst there is generally a resemblance in the composition of such diseased bones to those of the fœtus and of cases of osteomalacia.

TREATMENT OF INFANTILE DIARRHŒA.—Dr R. W. Foss highly recommends (*British Medical Journal*) the use of the powder or mucilage of gum-arabic in the diarrhœas of infants. When the stools are green, or pure fluid and involuntary, he adds gray powder in the proportion of one part to twenty of the powdered gum, of which five grains are given as a dose. When there is simple diarrhœa, with fetid stools, one part of the mucilage to three of water is all that is required.

TREATMENT OF ENLARGED TONSILS IN CHILDREN.—Dr. James Martin states (*ibid.*) that an eminent Dublin practitioner finds the sulphate of potassa, administered daily for a month or six weeks, almost a specific for enlarged tonsils in children. From five to fifteen grains are given every morning, with a small quantity of rhubarb and aromatics. The dose should produce mere laxity of the bowels, and must be diminished if it causes purging.

EXTERNAL PRESSURE IN CASES OF LINGERING LABOR.—Dr. W. S. Playfair narrates (*Lancet*, October 1, 1870) two vertex cases of labor, in which Kristeller's method of external pressure upon the fundus of the womb was successfully put into practice. In one, a lingering case of right occipital presentation, six pains, thus assisted, sufficed to rotate and deliver a child of "immense size." In the other, a case of hydrops amnii, after full dilatation of the os, complete inertia ensued, for which ergot was ineffectually given. After placing the woman on her back and spreading his hands over the fundus of the womb, the doctor made downward pressure every five or ten minutes, with the result of effecting delivery in about one hour.

A NEW METHOD OF DELIVERING THE AFTER-COMING HEAD IN CONTRACTED PELVES.—In arrest of the head at the brim in original breech cases, or after version has been resorted to, Dr. William Goodell (*American Journal of Obstetrics*, November, 1870) advises the following method, which he has repeatedly found successful. After grasping the neck and ankles of the child, the first movement of traction is to be made in the direction of the axis of the *outlet*, in order that the sacral side of the head may descend and be nipped by the promontory at the highest point possible. This manœuvre lengthens the lever-arm, represented by a line drawn from the base of the skull to the point nipped by the promontory. Without for a moment relaxing the traction-force, its direction must now be changed to that of the axis of the superior strait, by firmly pushing the child's body backward upon the coccyx. Thus, the gain in the leverage will cause the pubic side of the head not only to glide more readily over the smooth under-surface of the pubic symphysis, but also to describe a shorter arc of a circle around the promontory as a centre of motion. After the extrication of the head from the brim, the line of traction must be accommodated to the curve of Carus. Great advantage will be gained if an assistant makes firm pressure upon the vault of the child's head through the abdominal walls of the mother.

BELLADONNA IN NOCTURNAL INCONTINENCE OF URINE.—Dr. J. Burney Yeo (*Lancet*, October 22, 1870) reports two cases of nocturnal incontinence of urine treated successfully with from fifteen to twenty minims of the tincture of belladonna given thrice daily. The first case was that of a lad, aged sixteen years; the second, a girl of the same age. The author is of opinion that the remedy acts in these cases as a tonic to the sphincter vesicæ.

A COMMON SOURCE OF LEAD IN DRINKING-WATER. (*American Chemist*, November, 1870.)—Nearly three years ago, Mr. S. Dana Hayes, State assayer and chemist of Massachusetts, had occasion to investigate the causes leading to the very rapid corrosion of the metallic ice-water pitchers which were made at that time in immense quantities, and of which large numbers are still in use, though they are being gradually supplanted by those lined with glass or enamel. He was then surprised to find them, to say the least, such a source of danger; and since that time he has seen several cases of lead poisoning attributable to no other cause than the use of water from these metallic pitchers. These pitchers, as is well known, are formed with double walls. The outer case and the side walls are of Britannia metal, and the bottom of German silver or copper soldered to the sides. The whole is more or less thickly electro-plated with silver inside and out. Now, when the inner chamber is filled with "common alkaline, aerated, or other corrosive water", it becomes a mild galvanic battery, increasing in power with usage, the sides being composed of tin, antimony, and copper, and the bottom of copper, or of copper, zinc, and nickel together, while the solder is composed of lead and tin. Of course in such a state of affairs the lead of the solder is readily attacked; and the author found a large amount of this metal in water which had been allowed to remain 12 hours in an old pitcher, though the water used, being from the Cochituate, was comparatively pure. One pint of water, after one hour in the pitcher, contained perceptible traces of lead. After four hours it contained 0.35 grains, after twelve hours 0.80, after twenty-four hours 1.45 grains. The author draws attention to the fact that this was equivalent to 2.80 grains per gallon even at the end of four hours, while less than 0.01 grain per gallon has injuriously affected health, and cites this as another proof of what M. Gueneau de Mussy insists upon, viz.: "That contact, even mediately, between lead and other metals should be avoided in the construction of all reservoirs destined for the conservation of water for family use."

DETECTION OF STRYCHNIA IN MEDICO-FORENSIC ANALYSIS.—The author (*Moniteur Scientifique*, August 15, 1870, *Chemical News*, *American Chemist*, November, 1870) relates at great length a case of poisoning with strychnia of a person accustomed to consume opium, and to whom had been given large doses of ipecacuanha, while, moreover, a portion of the contents of the intestines had to be tested for mineral poisons. The real bearing of this case, therefore, turns upon the detection of the strychnia in the presence of emetia and morphia. The strychnia was detected in an alcoholic extract of the materials taken from the corpse by means of the reaction produced by strong sulphuric acid and bichromate of potassa, which at first oxidizes only the emetia, and, this having been removed, produces the well-known purple coloration due to the action of the bichromate and sulphuric acid upon strychnia. The morphia was detected in a separately-made amyl-alcoholic solution by means of molybdate of soda dissolved in concentrated sulphuric acid.

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EPILEPTIC GUINEA-PIGS.—Dr. Brown-Séquard has been still further experimenting on guinea-pigs rendered epileptic by artificial means. (*The Academy*, Oct. 22, 1870, p. 15.) These little animals become epileptic about nine days after section of one-half of the spinal cord or division of the sciatic nerve on one or both sides. The fits may be brought on at will by rubbing between the finger and thumb a portion of skin lying within a zone which includes the face, cheeks, and top of the head, and extends a short distance down the back, but misses the nose and ears. This zone is sharply defined by the immense quantity of parasites infesting it, this being due to the loss of common sensibility within the zone after the fits are established. Guinea-pigs subject to fits consequent on section of the spinal cord remain epileptic, although they can be cured by section of the skin within the zone; while the sciatic cases above referred to are cured in a year or a year and a half. In these last cases, the animal, which during the fits may have bitten the hind foot, tastes the blood, and nibbles off the two outer toes, the sensibility of which has been lost. The offspring of pairs thus affected have these toes absent; they become epileptic, and, on dissection, are found to have a node on the sciatic nerve similar to that developed after section of that nerve in the parent. Epileptic guinea-pigs also become liable to a dry gangrene of the margin of the ears, a similar affection to the othæmatoma of lunatics, and they transmit this condition to their offspring.

DEVELOPMENT OF THE HEART.—Prof. Rokitansky, who has devoted much of his valuable time and attention to researches on the pathology of the heart, has been led to adopt new views in regard to the development of that organ, somewhat different from those usually received. He will ere long publish a work on abnormal conditions of the heart, his collection of specimens being said to be the largest in the world.

TUBERCULOUS ULCERS OF THE MOUTH (Note sur l'Ulcère tuberculeux de la Bouche et en particulier de la Langue). M. U. TRÉLAT (*Arch. Gén. de Méd.*, January, 1870, p. 35).—After detailing a case in which the tubercular ulcer of the tongue preceded by six months a rapidly fatal general tuberculosis, the author makes the following remarks on its diagnosis:

A chronic ulcer, intractable, superficial, with red, irregular edges, without enlargement of neighboring glands, appearing without cause on the tongue or in the mouth, is very likely to be tuberculous. The probability is still greater if the patient is phthisical or tuberculous, or merely predisposed to tuberculization. The diagnosis is positive if there are also found on the mucous membrane of the mouth small round patches, slightly elevated, of a yellow color, and presenting one or more orifices of follicles over their surface, which still retains its epithelial covering. These patches are the first stage of the tuberculous ulcer.

He has established that, in some cases at least, these ulcers, known by the name of *buccal phthisis* or tubercular ulcers, are caused by ulceration of true tubercles; that they are always observed in tuberculous subjects, but that their appearance may precede that of the pulmonary tubercle, although the reverse is the general rule.

All treatment has as yet proved ineffectual; but Trélat recommends the use of the actual cautery at an early stage when the ulcer is small.

CHLOROFORM IN TETANUS.—M. Simonin, of Nancy, reports to the Academy of Medicine (*Arch. Gén. de Méd.*, June, 1870, p. 743) a severe case of traumatic tetanus cured by inhalation of chloroform. The treatment was pursued for 22 days, during which time 20 kilogrammes, 140 grammes of chloroform (equal to about 54 pounds troy, or 28½ pints) were employed. The only other treatment consisted of a few doses of opium and chloral. The diet throughout was nutritious.

RELAPSING FEVER IN EDINBURGH. By CLAUD MUIRHEAD, M.D.—Dr. Muirhead furnishes (*Edinburgh Med. Jour.*, July, 1870, p. 1) an interesting analysis of forty cases of relapsing fever which came under his care in the Royal Infirmary, Edinburgh, during January last. The origin of the cases was traceable to contagion, and Dr. M. believes the period of incubation to be about five days. The patients were, without exception, well fed, and not one of them was emaciated. They had, however, usually been occupying dirty and overcrowded lodgings, so that Dr. M. concludes that overcrowding has much to do with the production of relapsing fever. In addition to the ordinary symptoms present, the following are noted particularly: Eruption was present in but one case of undoubted relapsing fever, and in one other of doubtful nature. Marked prominence and erection of the hair-follicles, especially over the abdomen and thighs, was, however, frequently noticed during the paroxysm. Herpes of the face, ears, and neck was present in a few cases during the remission. In many cases the skin emitted a characteristic odor. The paper is accompanied by interesting diagrams of the temperature, and also by sphygmographic tracings of the pulse in the different stages of the disease, showing the marked difference between the pyretic and apyretic pulse-line. The usual digestive disturbances were present, accompanied by occasional enlargement of the liver, and almost always of the spleen. Jaundice was present in but one case. The blood was altered, the number of white corpuscles being increased, and the red corpuscles tending to form irregular masses instead of rouleaux. Headache and intense neuralgic pains were uniformly present; while delirium manifested itself in but four cases. The urine was much increased during the second paroxysm. Albumen was found in four cases, though it was not tested for in all of the forty cases. But few complications occurred,—pleuro-pneumonia in one case and epistaxis in two cases. Among the sequelæ, the principal were enlarged spleen and neuralgia, though conjunctivitis, swelling of the glands in the groin and neck, and of the parotid, purulent otorrhœa, anæmia, œdema of the legs, and partial and transient paralysis also occurred. Numerous modes of treatment were employed in hope of cutting short the course of the disease. Emetics were given, but with no definite effect. Cold packing was employed, but its effects were not such as to induce Dr. M. to recommend it. Quinia, in very large doses, given both by the mouth and hypodermically, arsenic, nux vomica, and iron, were all given, but without the *slightest influence* upon the occurrence of the relapse. Only one case proved fatal, and in that the only marked lesions were found in the spleen, which weighed 13½ ounces, and was firm and congested and stuffed with coagula.

AN AFFECTION OF THE JOINTS APPEARING IN THE COURSE OF SEVERE HEMIPLEGIA. Dr. E. HITZIG (*Virch. Arch.*, xlviii. p. 345, 1869, in *Schmidt's Jahrb.*, Bd. 145, No. 1, 1870, p. 23).—Affections of the joints in the course of disease of the brain or spinal cord have already been noticed by Brown-Séquard, Charcot (*Arch. de Phys.*, Nos. 1 and 3, 1868, pp. 161 and 379; and 1870, No. 2, p. 306), B. Ball (in *Med. Times and Gaz.*, 1868, and also in pamphlet, Paris, Asselin, 1869). The author has himself met with seven cases, occurring in the course of hemiplegia. The shoulder-joint is principally affected, and there is flattening of the shoulder, with a transverse depression below acromion, as in paralysis of the deltoid; pain in arm, increased by movement, and by pressure over upper part of inner surface of humerus; movement of scapula when arm was used as a lever; severe pain on pushing humerus up into its position, with marked crackling and crepitation. He did not meet with it within four weeks of the attack of hemiplegia, and noticed that it occurred early in proportion as the patient had left bed early. He explains it by the pressure of the head of the humerus, which has sunk down against the articular surface.

The prophylaxis and cure of this joint-affection demand passive movements; electricity only acts by aiding these motions.

PRACTICAL SUGGESTIONS FOR THE TREATMENT OF LACHRYMAL DISEASES. By Dr. C. R. AGNEW, in *Medical Record*, October 15, 1870, p. 367.—The author denounces external incisions in suppuration of the sac, as unnecessary, inelegant, and as liable to lead to fistula, and should never be made if they can be avoided. Two methods are presented for choice: one is to slit up the lower canaliculus from punctum to sac, and thus evacuate the matter; or, if that be prevented by excessive swelling, to make an incision behind the commissures of the lids, between it and the caruncle, where the cavity can be reached with the greatest ease, without embarrassment in the after-treatment of the case. To destroy the sac, access must be gained to its cavity, and the actual or potential cautery applied as far down the nasal duct as possible. To effect this,

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both canaliculi should be slit up, and any intervening portion of sac-wall freely excised. With a small strong scalpel, a sweeping cut is then made upwards and downwards, so as to split the wall of the sac that looks towards the eye, until a retractor can be introduced into the wall of the sac. Nitric acid or potassa fusa is then applied until no living mucous membrane is left. From neither of the above methods could it be determined from any external or conspicuous sign that an operation for the exposure or destruction of the sac had been performed.

A GIGANTIC MUSHROOM. — Dr. Wilwitsch (*The Food Journal*) has recently met in Africa with an enormous edible fungus. It is said to be as large as an umbrella, a single one sufficing for the supper of twenty men. The flavor of the flesh is very delicate. In the Præsidium of Bong-Andongo the plant is sold in market at 1*d.* to 3*d.* apiece. It is a true undescribed agaric.

M'BONDOU, OR ICAJA: AN ORDEAL POISON OF GABOON.— In their experiments with this root, which they themselves had collected, Messrs. Rabuteau and Peyre (*Pharmaceutical Journal and Transactions*, from *Comptes Rendus*) chiefly used an extract of the bark, the alcoholic being found the preferable. Both the wood and bark were found to contain one or more alkaloids. According to these observers, icaja acts upon the spinal marrow, not affecting the muscles directly. In frogs the first stage of action is a partial paralysis or paresis, so that the animal jumps but feebly and with difficulty. If the dose be sufficiently large (three milligrammes), a state of excitability now appears, so that the least shock causes tetanic convulsions: these are accompanied by rigidity, not so pronounced, however, as in strychnia poisoning. In dogs and rabbits the poison produced "shocks", "like electric shocks", with panting, paralysis of hind legs, and great general muscular weakness. There was no loss of consciousness; but any effort of the dog to respond to caresses or its master's voice brought on violent convulsions. Death occurs in the midst of convulsions, from asphyxia. The elimination of the medicine is very rapid, the symptoms subsiding in two hours. The authors think the symptoms most closely resemble those caused by brucin, of all the known alkaloids.

NORMAL POSITION OF THE UTERUS. By CREDÉ (*Arch. f. Gynäkologie*, 1870).—In order to determine the normal position of the uterus after delivery, Credé has analyzed the results of 3000 examinations made between the tenth and fifteenth days after childbirth. In 397 of these women he found the uterus anteverted, in 326 anteflexed; but these numbers the author states would have been doubled, if formerly, as now, the slighter degrees of deviation had been recorded. In only 28 cases (not 1 per cent.) was retroflexion observed. Numerous post-mortem examinations of infants and young girls have confirmed Aron's statement, that the uterus is normally slightly anteflected, which explains the tendency "in puerperio" to this deviation in position, which may be regarded as normal, and not due (as Prof. Martin affirms) to defective involution of the placental attachment. Credé thinks that retroflexion of the organ is always abnormal and caused by relaxation of the uterus, profuse hemorrhages, a too capacious pelvis, a want of tonicity in the posterior vaginal walls, or to rupture of the perineum. Bidder agrees with Credé with regard to the frequency of anterior deviations after delivery. He found anteflexion in 20 per cent., anteversion in 46 per cent., while retroflexion existed in only 1.4 per cent. The careful drawing lately published by Kohlrausch, made from the section of a frozen female body, also represent the uterus as slightly anteflexed.

HÆMATOCELE AND HÆMATOMETRA. (OLSHAUSEN, *Archiv. für Gynæcologie*, vol. i.)—In the last edition of his text-book on Diseases of Women, Scanzoni states that during twenty years' practice he has met with only three instances of pelvic hæmatocele; Hagenberger only records two in 597 cases; while Credé, in 293 cases, has never been able to satisfy himself of its existence. In contrast with these statements, Olshausen, in a recent paper, founded on 769 cases which occurred under his own observation in the lying-in hospital at Halle, reports twenty-nine instances of this disease (nearly four per cent.). He urges as diagnostic marks, the seat of the tumor, which is almost invariably behind the uterus; its form, which is usually globular, but often presenting small irregularities of surface; its slight susceptibility; and its changing consistence, during the first eight days being always elastic and often fluctuating, then gradually becoming firmer and doughy, and finally almost solid. Among the subjective symptoms are the previous menstrual irregularities, sudden and alarming prostration, followed by symptoms indicating pelvic peritonitis. He confirms the views of Bernutz and Goupil regarding the possibility of the blood regurgitating from the uterus along the Fallopian tube into the abdomen, by the detailed history of a case of Atresia vaginæ following typhoid fever, with hæmatometra and subsequent hæmatocele; paracentesis was performed, fatal peritonitis ensued, and a post-mortem examination proved clearly the passage of the blood along the distended Fallopian tube into the abdominal cavity.

CYSTICERCI IN BRAIN.—In a paper on Facial Paralysis, by Roberts Bartholow, M.D., in the *National Medical Journal*, April, 1870, vol. i. No. 1, p. 1, a case is related where the patient suffered with partial right hemiplegia and complete right facial palsy. At the autopsy, five cysticerci were found in the brain, three of them deeply imbedded in the gray matter of the outer and superior portion of the right and left hemispheres, one in the right optic thalamus under the ependyma of the ventricle, and the fifth on the left side of the floor of the fourth ventricle, in which it made a deep indentation. A spot of softening, about the size of a filbert, also existed in the left corpus striatum. The cysticerci were uniform in size, being about as large as a full-grown filbert. They presented the ordinary characteristics of these bodies, and, as usual, were barren.

The author is disposed to explain all the paralytic symptoms by the pressure of the tumor on the floor of the fourth ventricle, without attaching any import to the patch of softening in the left corpus striatum.

MISCELLANY.

MEDICAL literature will be deprived of one of its main sources of supply as long as Paris is beset by the Prussians; nor will the paralyzing effects of the war be done away with for a long time after peace is declared, on whatever basis. The *Gazette Médicale* has suspended publication, and so, we presume, have all the other medical journals. No books have been received from Paris for several months. *Inter arma silent leges.*

AT the meeting of the trustees of the University of Pennsylvania on Tuesday, December 6, it was agreed that the degree of Doctor of Philosophy be conferred annually, at the commencement in July, upon such graduates of medicine as had attended two full courses of lectures by the Auxiliary Faculty of Medicine and passed a satisfactory examination thereon. It will be remembered that the lectures of this faculty embrace: Geology, Botany, Zoology and Comparative Anatomy, Medical Jurisprudence and Toxicology, and Hygiene.

A NATIONAL MEDICAL CONVENTION of volunteer medical officers, contract and commissioned, of the United States Army and Navy was to have met in Washington on the 15th of December, but it has been postponed until the 18th of January. The projectors of the movement aim at including in the organization every medical officer who served in the late war, and making it a permanent association. All who approve of the plan are requested, if they cannot be present in person, to send their names to Dr. T. B. Hood, Washington, D.C.

HEAVY DAMAGES.—Suit was recently brought against the city of Philadelphia by a Miss Williams, for damages on ac-

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count of an injury sustained by her in May, 1869. She was watching the lowering of a water-wheel into its place, when the shears swept round and struck her on the leg, "fracturing it in a frightful manner, and laming her for life." The jury awarded her $10,000 damages.

AN ordinance establishing rules and regulations for the government of the Philadelphia Morgue was duly signed by the mayor, having passed both branches of the City Councils, and goes into effect on the 1st of January, 1871. The building is at the northwest corner of Beach and Noble Streets, in the Eleventh Ward. It would be well for medical practitioners in the city to acquaint themselves with these rules.

THE friends of homœopathy in New York State are working hard to get an insane hospital established, to be conducted in accordance with their tenets.

WE learn from the *British Medical Journal* that "among the most recent additions to the ranks of the medical profession in New York are Lum-Ling-Wan, Doctor of Medicine, Ah-Mok, Ah-Sam, and Lu-Sing. The two are apothecaries, and the last is interpreter. They are well provided with a varied assortment of drugs. It would probably puzzle our own medical council to register these gentlemen; but no such difficulties will exist in America."

We think the city meant is not New York, but San Francisco, where the Chinese most do congregate, and where alone a reasonable degree of success might be looked for by such adventurers. And we fail to see where the difficulty would come in as to "registration." The same rule would apply to these as to other quacks, of whatever nationality,—British, for instance; they would not be registered at all. We doubt if the Chinese would be patronized, unless possibly by their own countrymen, to a sufficient degree to keep them alive.

BARON DIERGARDT, of Bonn, who lately gave the German Hospital in London the sum of £10,000, has made a like donation of $50,000 to the institution of the same name in New York.

IN the examination of candidates, whether for the army or navy medical service, a feature of acknowledged importance is the bedside examination, the applicant being called upon to make out a diagnosis and to sketch a plan of treatment in an actual case. In the examinations for degrees in our schools this is not done, at least in most of them; and, indeed, it would involve the necessity of access to a hospital ward. We hope the day is not far distant when every school will have its hospital, and then that evidence of the bedside experience of the student will be indispensable to his graduation. The mere ability to answer questions does not insure that practical tact, a foundation for which is best laid by familiarity with actual disease during the whole course of student life.

THE Psychological Section of the British Medical Association held their first meeting in August last, at the thirty-eighth annual session of the parent body, in Newcastle. Dr. Laycock presided. Papers were read on chorea, syphilitic insanity, the use of the thermometer in the diagnosis and treatment of insanity, the etiology of general paresis, and on delirium tremens. We presume that in this country the Association of Superintendents of Insane Asylums, now in operation for some years, corresponds pretty nearly, in objects, membership, and organization, to the "Psychological Section."

THE "New York Society for the Relief of Widows and Orphans of Medical Men" had a dinner at Delmonico's on the 29th of November, it being their twenty-eighth anniversary. The annual statement showed the society to be in a prosperous condition.

ATTENTION is called by Dr. Lawson Tait, in the *British Medical Journal* of September 24, 1870, to the possibility of the spread of the scarlet fever and other contagions by means of milk; the oil-molecules of the cream being, like any other oily substances, very ready solvents of odoriferous matters, and perhaps, therefore, of the particles by which diseases are communicated.

IN one of the daily papers we find an account, evidently by a medical pen, of a case of "hydrophobia cured with chloral hydrate." One element of the treatment was a warm bath every three hours, "to get him used to water." The narrative concludes as follows:

"He was kept more or less under the influence of chloral hydrate four days. In a week he was well. The chloral hydrate co-ordinated the entire nervous system." * * * * "The physician who thoroughly understands the physiology of the nervous system has in chloral hydrate the greatest agent ever discovered for allaying nervous irritability of an acute character, and a certain balm for soothing acute mental aberration."

VIVISECTIONS.—The following resolution is reported as having been passed at a recent meeting of the General Committee of the British Medical Association:

"*Resolved*, That the Committee of Section D be requested to draw up a statement of their views upon physiological experiments in their various bearings, and that this document be circulated among the members of the Association; that the said committee be further requested to consider, from time to time, whether any steps can be taken by them, or by the Association, which will tend to reduce to its minimum the suffering entailed by legitimate physiological inquiries, or any which will have the effect of employing the influence of this Association in the discouragement of experiments which are not clearly legitimate on live animals."

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending Nov. 26.	Dec. 3.
Diseases of the Brain and Nervous System	37	33
Diseases of the Organs of Circulation and Respiration	94	113
Diseases of the Abdominal Organs	23	19
Zymotic Diseases	14	11
Constitutional Diseases	5	8
Casualties	9	6
Stillborn	13	16
Unclassified	43	50
Unknown	2	0
Adults	130	140
Minors	110	116
Totals	240	256

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 18, 1870, TO DECEMBER 3, 1870, INCLUSIVE.

MAGRUDER, D. L., SURGEON.—By S. O. 224, C.S., Headquarters Department of the Missouri, granted leave of absence for *thirty days*.

COWDREY, S. G., ASSISTANT-SURGEON.—By S. O. 221, Headquarters Department of the Missouri, Nov. 22, 1870, to proceed to *Fort Gibson*, C.N., and report to the commanding officer of that post for duty.

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MONDAY, JANUARY 2, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURES

ON THE TREATMENT OF STRANGULATED HERNIA.

BY S. D. GROSS, M.D., LL.D.,
Professor of Surgery in the Jefferson Medical College of Philadelphia.

No. III.

IN my last lecture I called attention, in a general manner, to herniotomy and to the proper method of restoring the protruded structures to the cavity of the abdomen. The subject next to be discussed is the condition of the strangulated parts, with a view of ascertaining whether they can with safety be returned to their natural situation. I shall assume, for the sake of illustration, that the hernia consists both of bowel and omentum.

In all cases of strangulation, even if only of very short duration, the protruded structures must necessarily be more or less inflamed and changed in appearance. The alterations are generally in proportion to the violence of the constriction rather than to its duration. Hence they are usually most conspicuous in recent herniæ, small in size, and attended with severe suffering. The principal morbid conditions are injection of the capillary vessels of the protruded parts, with more or less discoloration, infiltration, softening, ulceration, and gangrene, effusion of serum and lymph, enlargement, and adhesions.

The injection of the vessels is always more distinctly marked in the bowel than in the omentum, owing to the difference in their vascularity. In strangulation of the intestine it is at first of an arborescent character, but it soon becomes capilliform, and, in severe cases, even punctiform or blotchlike, from the escape of blood into the subserous cellular tissue. These changes deserve attention, inasmuch as they are expressive of different grades of severity in the constriction. An arborescent arrangement of the vessels is denotive of a milder degree of inflammation than the capilliform, the capilliform than the punctiform, the punctiform than the maculiform or ecchymotic. Upon the shades of color dependent upon these various forms of vascularity are founded important indications of treatment. When the injection is arborescent, the constricted bowel will either be red, or red verging upon purple, and there can be no hesitation in regard to the propriety of restoring it to the cavity of the abdomen. In the capilliform injection the serous layer will be of a deep purple, modena, or livid aspect, either uniformly or in patches of variable extent, showing that the inflammation has made greater strides. In the punctiform, maculiform, or ecchymotic vascularity there is always an actual effusion of blood into the subserous cellular structure, showing that the coats of the vessels have given way, and that there is more serious disorganization of the bowel, rendering it perhaps questionable whether it should be replaced or retained in its extra-mural situation. As a general rule, it may be assumed that mere discoloration, however great, even if it is black and uniformly diffused, is no evidence of gangrene. The circulation is only impaired, not completely arrested, and the bowel may therefore be returned without risk of evil consequences. It is otherwise when, to great discoloration, there are superadded structural changes, as softening and infiltration, total stagnation of the blood, coldness of the protruded parts, and copious effusions of lymph and serous fluid of a dark hue, from the presence of hematin. In such a case the proper plan, after the division of the stricture, is to wait a short time, with a view of seeing whether there will be a restoration of the circulation, the bowel being in the mean while carefully fomented with a soft sponge or cloth wrung out of warm water. From ten to fifteen minutes may often be profitably spent in this manner. If at the end of this time there is no evidence of reaction in the part,—no sign of returning life in the vessels,—the only course to be pursued is to open the bowel and establish an artificial anus. To replace it into the abdominal cavity would under such circumstances be almost sure to be followed by fatal peritonitis, if not by actual rupture of the tube and an escape of its contents.

Marked blackness does not, I repeat it, in itself constitute a sufficient reason for not returning the protruded bowel. It is only when it is conjoined with the other phenomena above described that there should be any hesitancy about it. To show how harmless such a condition really is, I may here briefly relate a few particulars of a case which came under my observation last July:

A woman, forty-five years of age, of delicate frame, but at the time in good health, was suddenly seized, while engaged in some housework, with strangulation of an inguinal hernia the very existence of which she had almost forgotten. She had formerly worn a truss, but for several years past its use had been abandoned, and she gave herself no concern about her rupture, as it was very small and seldom protruded. On the occasion referred to, the bowel suddenly descended, and she found it impossible to push it back. Her family physician, who was soon after sent for, was equally unsuccessful, after repeated and persevering efforts. She spent a restless night, suffering intense pain in the abdomen, especially in the region of the tumor, and vomiting almost incessantly, although she did not, so far as could be ascertained, eject any fecal matter. I saw her the next morning at eight o'clock, twenty hours after the commencement of the strangulation. The tumor, about the size of a small goose-egg, was exquisitely tender and intolerant of the slightest manipulation. To employ the taxis was out of the question; and I therefore, as soon as the patient was thoroughly anæsthetized, laid the tumor open and divided the stricture, which was one of unusual tightness. The bowel was completely black; but, as it was free from softening and infiltration, I unhesitatingly returned it. A large dose of morphia being administered, the woman soon became tranquil, the vomiting ceased, and the pain promptly disappeared. Under the use of hot anodyne fomentations, the abdominal tenderness also gradually subsided. The bowels were relieved by an enema of turpentine on the fourth day; the wound united nearly in its entire extent by adhesive inflammation, and recovery occurred without one bad symptom. It is an interesting fact that in this case there was no effusion of lymph; but the quantity of serous fluid was unusually large, and, what was singular, it was divided as it were into two distinct portions, the superficial being perfectly clear and limpid, while the deep, or that nearest the stricture, was of a dark, almost black, color.

Ulceration of the bowel may be present and yet the discoloration be comparatively slight,—not such as would in ordinary cases cause any serious apprehension as to the result. If the stricture is very tight, as so often happens in very small, recent herniæ suddenly strangulated, the coats of the tube readily give way under the excessive pressure, generally in little circumscribed spots, perhaps not larger than a millet-seed or split pea. In rare cases the entire circumference of the tube is eroded or fatally indented, the part looking as if it had been tightly compressed by a ring. The treatment of such occurrences is sufficiently plain. Any little openings that may exist are included in a well-waxed ligature, the ends of which are cut off close to the knot, when, the stricture having been relieved, the bowel is returned to the abdominal cavity. Such a proceeding is the only correct one, provided the perforations are

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not numerous or large. When this is the case, the proper practice is to incise the bowel and establish an artificial anus. This course is especially necessitated when along with ulceration there are deep discoloration and copious effusion of black-colored serosity, indicative of violent inflammation. The ligature used in these operations gradually finds its way into the intestine, and is finally discharged along with the feces.

The appearance of the fluid contained in the hernial sac is of great diagnostic value with reference to the amount of injury sustained by the protruded structures. If it be limpid, or nearly so, it is an infallible sign that the constriction has been comparatively light, and that, consequently, the parts have not suffered any serious injury. On the other hand, a dark, blackish serum invariably implies the opposite of this condition, often causing doubt as to whether the bowel should be returned or left in its unnatural situation. In the case above described, where the constriction was very firm, the fluid, more than ordinarily abundant, was divided as it were, singularly enough, into two distinct portions, a black and a limpid, and the bowel was so much discolored that, if I had not had some experience in such matters, I might have had some hesitation about the propriety of returning it.

It is not often that the bowel is materially, if at all, enlarged in strangulation. Such an occurrence can never happen in a recent hernia—hardly, indeed, in an old one, at least not to any extent—unless the protruded part consists of the large bowel, especially that portion which is provided with epiploic appendages, which now and then, under the influence of long-continued irritation, become more or less hypertrophied. Should the enlargement be so great as to interfere seriously with the return of the tube, the best plan will be to let it remain in its abnormal position.

Slight impediment to reduction occasionally arises from œdema of the coats of the bowel from effusion of serum into the connective tissue, especially the subperitoneal. Gentle but steady compression, with the free division of the stricture, will generally effectually surmount the difficulty.

I have known a twisted condition of the bowel to interfere with restoration. Should such a condition exist, gentle manipulation will easily relieve it.

Firm adhesions, incompatible with the ready restoration of the bowel, rarely occur in young herniæ, however tight the strangulation. Fibrin may exist in large quantity in such a case, but it is too soft to offer any serious barrier to reduction. The slightest pressure of the finger or of the handle of the scalpel is sufficient to break it down. It is different when the rupture is old, or when it has been the subject of protracted irritation: then the adhesions are often exceedingly firm, and the utmost care may be required in liberating the parts. Indeed, cases occur in which this is altogether impracticable, notwithstanding the most adroit and patient efforts. The best instrument for effecting severance is the finger: when this fails, recourse must be had to the knife, used with the utmost possible circumspection, lest serious mischief befall the bowel.

The adhesions may be situated, first, between the bowel and sac, between the bowel and omentum, or, lastly, between the two coils of intestine. In old herniæ the bowel and sac are sometimes firmly adherent to each other and to the neck of the rupture, and all attempts to effect reduction in the ordinary way are ineffectual. Under such circumstances, it has been advised to divide the parts in such a manner as to establish an artificial anus, an injunction generally more honored in the breach than in the observance. A little care and patience will usually enable the surgeon to detach the sac from its connections, so as to allow the stricture to be safely approached with the knife.

When the adhesions exist between the bowel and omentum, great care is required; otherwise the attempt to effect severance may occasion serious injury. It sometimes happens that the bowel is completely surrounded by a fold of omentum, so as to mask more or less thoroughly the nature of the case. In such an event an incautious stroke of the knife might readily inflict a wound upon the imprisoned tube, followed either by an artificial anus or by fatal peritonitis.

Although the coats of the bowel are rarely in any case enlarged, great embarrassment is sometimes experienced in the reduction from the distention of the gut by the presence of an inordinate quantity of gas, or gas and feces. Here patience and perseverance will be required, and will be likely to be crowned with success, gentle, steady pressure usually sufficing for the purpose. When the effort fails, a delicate trocar, as fine almost as an exploring-needle, is inserted, and the gas drawn off, when the more solid matter may commonly be pressed up without any difficulty.

The management of a strangulated omentum must be conducted upon the same general principles as that of a strangulated bowel. An omentum in this condition exhibits comparatively little change of color, differing in this respect greatly from a strangulated intestine. It may be of a bluish, lilac, purple, or brownish hue, but under no circumstances, however severe the constriction, is it of a livid or black color. The vessels may be deeply injected and much enlarged in consequence, but there is no capilliform arrangement of them; and it is very uncommon to meet with maculiform or ecchymotic blotches, except when the parts have been severely contused in the employment of the taxis. A considerable degree of softening is occasionally present, and this occurrence, superadded to the complete stasis of the blood in the engorged vessels, is generally the best criterion of the existence of gangrene. Important light will of course be furnished by the state of the bowel and by the nature of the effused fluids in the hernial sac. It is seldom that one structure escapes when the other is affected with gangrene. Both usually die together,—omentum often before bowel, owing to its more feeble vitality.

The only treatment adapted to a gangrenous omentum is excision of the affected structures and ligation of their vessels, each one being included in a separate ligature, one end being cut off close, and the other brought out at the wound. Such a course is proper even when there is merely a suspicion of the existence of mortification; since it is far better, so far as the safety of the patient is concerned, to retrench the constricted parts than to run the risk of returning them in a condition in which, if they are not actually dead, they may perish after their replacement, and thus inevitably occasion fatal peritonitis. There is one precaution of great moment in excising a gangrenous omentum which cannot be too forcibly inculcated. It is to prevent the sudden retraction of the stump into the abdominal cavity, where, if the bleeding vessels have not been properly secured, an annoying, if not dangerous, hemorrhage might occur. Holding the parts with the thumb and finger, a volsella or a ligature will generally be quite sufficient for the purpose.

Some surgeons, instead of excising the gangrenous structures, allow them to remain in the wound, to be detached by sloughing. Such treatment, although generally perfectly safe, inasmuch as the living parts usually speedily become adherent to the surrounding tissues, is commonly followed by a tedious process of cicatrization, if not by worse consequences, as colicky pains and disagreeable dragging sensations, long after the cure is completed.

Excision of the omentum is sometimes required on account of an enlarged and indurated or hypertrophied

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condition of the protruded parts. Such a contingency is almost peculiar to very old ruptures, in which the dislocated structures, from long-continued pressure, have acquired a bulk altogether disproportionate to the opening of descent, and where, consequently, reduction cannot be effected without a certain degree of retrenchment. When, in addition to the hypertrophy, the parts are firmly adherent, the most judicious plan is to let them remain intact, provided they do not interfere with the restoration of the bowel; since, when the wound is healed, they may serve to plug up the opening in the wall of the abdomen, and thereby prevent further protrusion. Mere adhesions of the omentum, of an ancient date, should be managed upon similar principles. Recent ones, on the contrary, should be carefully severed, as they usually may be with a little effort of the finger or the handle of the scalpel.

I now come to speak of some of the varieties of herniotomy. In the preceding lecture I described the more common operation, at least so far as the surgeons of this country are concerned,—namely, that in which the sac is opened. The operation in which the sac is left unopened was originally performed by J. L. Petit in the early part of the last century, and is fully described in his posthumous work entitled "Traité des Maladies Chirurgicales," published in 1774. He was led to adopt this procedure from having noticed that the ordinary operation was frequently followed by the death of the patient, and he concluded that the principal cause of the mortality was the exposure of the protruded viscera to the air, and the rough manipulation to which, in this nude state, they were subjected in the efforts at restoration. He therefore thought it was better to divide the stricture without opening the sac than to pursue the usual routine practice; and the result of his experience fully justified the wisdom of his decision. The operation of Petit is strictly subcutaneous, and is the earliest method of the kind upon record, antedating that of Stromeyer for the cure of club-foot by upwards of a century.

The operation of Petit met with little favor from the profession until upwards of one hundred years after he first performed it. Most of the French, English, and German surgeons of the last century condemned it on account of its supposed dangers. Dr. Monro, secundus, of Edinburgh, published four cases in which he successfully employed it; but, although he spoke of the operation as far superior to the ordinary one as a safe procedure, his remarks seem to have attracted little, if any, attention in Great Britain. Sir Astley Cooper, in his great work on Hernia, recommends Petit's method in large and old ruptures, and gives the result of several illustrative cases. In 1829, Mr. Aston Key, of London, in a clinical lecture, fully discussed the value of the operation; and in a memoir on the advantages and practicability of dividing the stricture in strangulated hernia on the outside of the sac, issued in 1833, he strongly advises its general adoption. Since that period the operation has met with more or less favor both in Europe and this country, in the latter of which, however, it has apparently attracted less attention than its real merits deserve. To show the differences in the result between the ordinary procedure and that in which the sac is left intact, I may state that of 774 cases of the former analyzed by Mr. Gay, of London, from private and public practice, 334, or about one-half, perished. Of 185 cases, collected by different operators, in which the sac was not opened, only 36 died,—furnishing thus a much smaller death-rate, or only about one in four. It is to be regretted that there are no reliable statistics of Petit's method on a large scale, so that a very full comparison of the mortality of the two procedures might be instituted.

The operation of Petit is not without its disadvantages, and it has even been asserted that its evils more than counterbalance its benefits. This, however, is certainly, as we have just seen, not the case. The objections are, first, the difficulty, if not utter impossibility, of ascertaining the precise condition of the protruded viscera; and, secondly, the fact that reduction must always be effected in mass. If the parts should be returned in an ulcerated or gangrenous condition, fatal peritonitis will be inevitable; and the result will hardly be less disastrous if, when the viscera are replaced in mass, there is, as not unfrequently happens, an internal stricture, or, at all events, such a state of things as to interrupt effectually the transmission of the contents of the bowel. Besides, as the protruded parts are returned together, a much freer division of the stricture is generally required than when they are reduced separately. Finally, I am not at all certain that when the case is treated in this manner there may not be some risk of peritonitis from the irritating effects of the serous contents of the hernial sac, especially when they are very abundant and high-colored. The peritoneum, naturally very sensitive, is always greatly fretted in strangulation, and ready to resent any encroachment of foreign matter, even when it consists of its own secretion.

It is not easy to point out with any degree of exactitude the class of cases to which this operation is more especially adapted. Sir Astley Cooper thought that it should be restricted mainly to large and old ruptures; and there is no doubt, I think, that such cases generally fare better than small and recent ruptures, as the protruded viscera are usually less damaged, and therefore in a more suitable condition to be returned with impunity. When the hernia is very young and the strangulation uncommonly rapid and severe, I believe that the safest practice generally is to open the sac and to replace the parts separately. Such a course is especially indicated when the pressure has been concentrated upon the neck of the sac.

Subcutaneous division of the stricture is occasionally practised. The plan, so far as I know, was originally suggested by M. Bouchut, a French surgeon, but it has never met with much favor, either abroad or in this country. My colleague, Professor Pancoast, if I mistake not, has employed it upon several occasions; and in the hands of a man of such well-known skill the procedure might be perfectly safe; but this could hardly be said of an ordinary operator. The danger of wounding the bowel must be great, even when the utmost care and skill are exercised. The procedure is literally a blind one, and I have, I must confess, no particular fancy for its employment.

The principal accidents in herniotomy are two,—hemorrhage and wounding of the bowel. The bleeding is generally very trifling, and seldom requires any particular attention. Occasionally, however, it is quite serious and even alarming, depending upon the division of an artery or vein of considerable size,—as, for example, the epigastric or obturator. When this is the case, the proper plan is to expose the vessel and secure it with the ligature, or, if this be impracticable, to control it, if possible, by acupressure, by means of a pair of spring-forceps permanently retained in the wound until a firm clot has formed, or by digital compression maintained by a relay of assistants. Ice, Monsel's salt, and exposure of the wound to cold air are also worthy of trial. I have myself never met with any unpleasant occurrence of this kind, and there will, I am quite sure, be seldom any trouble if proper care be taken in dividing a stricture, the smallest incision generally sufficing to liberate the protruded structures.

A wound of the bowel can only be avoided by proper care in exposing and opening the hernial sac. Should such a contingency arise, the opening should at once be closed with Lembert's suture, the stitches being

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sufficiently near each other to protect the parts from fecal extravasation. It is only when the wound is uncommonly large and the intestine in a very diseased condition that the injured structures should be left in their extra-mural situation.

ORIGINAL COMMUNICATIONS.

THE APPLICATION OF LOCALIZED MOVEMENTS

TO THE TREATMENT OF CERTAIN FUNCTIONAL NERVOUS DISORDERS.

BY WM. R. FISHER, M.D.,
of New York.

(*Continued from page 76.*)

PART II.

THE muscular system, when it is the seat of manifestations of this condition of nervous depression, more frequently assumes a state of pseudo-paralysis than of spasm.

Case IV.—Mrs. B. C., 50 years of age, an intelligent lady, whose temperament was decidedly sensitive and excitable, had been in poor health for many months, and had undergone a variety of treatment, both local and general, for uterine disease. After suffering severely from excessive menorrhagia, a small polypus was discovered by her attending physician to be protruding through the os uteri. It was removed, and the vagina was packed with a tampon of lint. When the proper time arrived for withdrawing this plug, the physician, unfortunately, was not thorough in his work, removing only some fragments, and allowing a large mass to remain. An offensive discharge was soon set up from the vaginal mucous membrane, the strength of the patient began to fail, and profound constitutional disturbance was exhibited. For three weeks she continued to grow worse, when a fetid mass was expelled from the vagina while she was at stool, and following its removal there was at once a decided improvement in the serious symptoms which had been developed. But, to the surprise of her physician (at this time a prominent homœopath), she began to lose control of her legs; and, as the loss of power steadily increased, he was discharged and Dr. Taylor summoned to the case. An examination showed that while sitting in her chair she could execute every movement with considerable force in each leg; but when asked to walk she seemed almost incapable of exerting her muscles in the lower extremities, though her efforts to prevent herself from falling by clinging to her husband gave evidence of abundant power elsewhere. The diagnosis in this case had been paralysis from pyæmia; but it is needless to say there were no symptoms of pyæmia; nor was there paralysis, properly speaking. A favorable prognosis was given, and the family were told that her condition was not dependent upon any organic change in the nerve-centres or their distribution, but was simply an indication of a loss of consciousness of power, arising from the shock which had been gradually inflicted upon her by her prolonged illness, with its repeated hemorrhages and the subsequent exhausting discharge; that, though the pseudo-paralysis was curable, no treatment could be recommended until signs of reaction were manifested, and that probably she would sink still deeper into a state of helplessness before that time. Within a week she was unable to move her legs at all when placed in the upright position, and was in general much more feeble. She was then brought to our institution, put to bed, and all her friends were rigorously excluded. For a month she continued to lose ground. She became greatly emaciated, lost all power of motion in her arms and legs, and at times could not articulate distinctly; her muscular sense was also impaired in the lower extremities, so that sometimes she could not tell their position. But no treatment whatever was applied during the continuance of this condition of prostration; and, as had been predicted, reaction last was established without interference. It requires the utmost resolution to stand by idly and watch the downward course of such a patient, while her friends are anxiously urging us to employ some active means to check it; but experience has shown that the expectant plan is by all means the best to be pursued. Medicine has no drug that will supply the place of absolute rest and quiet in this state of depression; but the powerful nervines and stimulants which are often recommended may frequently produce the most injurious effects. As soon as her returning strength would warrant, she was placed upon her feet in the peculiar manner which we employ, and after a treatment of ten weeks was discharged entirely cured.

The first attempt to place a feeble patient in the erect position by the method ordinarily employed is usually followed by complete exhaustion. The physician, in lifting her from the bed to the floor and striving to sustain her weight upon his hands placed under her arms, leaves the back and limbs entirely unsupported. Her knees and hips yield to the unaccustomed weight which is thrown upon them, and a struggle ensues in the attempt of both parties to prevent her from falling, which usually results in a strong disinclination on the part of the physician to repeat the experiment, which is heartily reciprocated by his patient. The means which we adopt when first placing our patients with functional loss of power upon their feet obviate these difficulties completely. A pair of light steel braces, attached to shoes and running up on either side of the leg to the middle of the thigh, with knee-caps to prevent flexion at this joint, are placed upon the lower limbs. The patient is then brought to the edge of the bed, a strap is passed around her hips and thence around the body of the physician, who stands by the bedside, and she is gently raised up and placed upon her feet. Her legs are supported by the braces, her knees are prevented from bending, while her hips and body are sustained by the strap and the hands of the physician. If there be a tendency to sink down under the emotional excitement which is usually produced by the assumption of this novel position, it is immediately checked by the supports which have been supplied at all the weak points, and the patient feels that to fall is an impossibility. The physician slowly steps back, inclining to one side with a rolling motion, and, gently drawing the opposite side of her body towards him, her foot advances. This is repeated with each foot alternately as long as seems to be judicious, and the patient is returned to her bed. The moral effect of this procedure upon such a case as we have described, to be appreciated must be witnessed. The fact of standing once more, after a long confinement to the bed, imparts an exhilarating influence throughout the system which cannot be as quickly attained in any other way, and amply repays for the increased suffering which may have been called forth in acquiring it. Each day these walks are repeated, and, by extending their length and gradually diminishing the support, the tonicity of the muscles of the trunk and extremities is improved, a corresponding regularity in the manifestations of nervous action is established, and the patient advances steadily to recovery. As the object of this treatment is not to bring about muscular development by exercise, but to correct functional derangement of the nervous system, considerable tact is requisite in regulating the frequency and duration of these exercises, to avoid overtaxing a system which is already much enfeebled; and the physician should constantly bear in mind that his treatment must be regulated by the condition of his patient, and not by any set rules. Sometimes the effect of standing for the first time after a long interval is an overwhelming prostration which approaches syncope. When this occurs, the patient is to be immediately returned to the recumbent position and left alone.

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A short interval of rest will invariably bring about a return to the ordinary condition, and a second trial will probably be more successful.

Case V.—The first case reported in the article already referred to* is an admirable instance of the loss of consciousness of power without complication; and, as the lady has again been under our care with a return of the former condition, her case may here be introduced in illustration. After her recovery from the first attack she enjoyed excellent health for nearly two years; but during the winter of 1869 her father fell ill of a lingering disease, which terminated fatally in the spring. She was much harassed in body and mind during the many weeks of constant nursing and anxiety which she passed at his bedside; and when his death removed the incentive to exertion which had sustained her up to that time, her enfeebled powers rapidly yielded under the burdens which she had unremittingly heaped upon them. She began to lose the sense of power in her left leg, which had in the former instance been the more affected, and rapidly the "paralysis" became complete. She was then removed to our institution, and under the usual treatment was soon able to walk about without assistance. Her ankle, however, remained weak for some time after, probably from the dragging of the foot, which in the first attack had lasted for more than a year; but a light brace worn within the shoe as a support was an effectual remedy. Had she been submitted to proper treatment in the commencement, this would not have been required.

There are two points of interest which this case presents for consideration. In the first place, the origin of the loss of power in both attacks was essentially the same,—a shock acting upon an enfeebled state of body. In the first the exciting cause was diphtheria; in the second it was domestic affliction; and the similarity of the resulting effects tends to show that the opinion expressed as to its true nature was correct. Secondly, the treatment was the same in both attacks, and was attended in both with recovery, which is additional evidence in favor of the unity of origin. The essence of this condition, as we have already stated, lies in an abnormal state of perception and volition, and a plan of treatment, to be successful, must be applied to the restoration of the perverted functions to their natural relations. So long as a patient affected in this manner is kept in bed and internal remedies are alone administered, there is not likely to be any appreciation of the presence of power in an affected part; for our ability to put forth muscular action is under all circumstances in direct relation to our consciousness of strength, and not to the actual amount of capacity existing at the time. A feeble man, under the influence of fear or impending danger, will accomplish without difficulty a feat of strength which he is utterly incapable of repeating by any effort of the will when relieved of the emotional excitement, simply because he has already measured the extent of his muscular power under ordinary circumstances, and his consciousness assures him of certain failure if he endeavor to exceed it. So it is when a disordered nervous system has communicated to the mind the impression that a limb has suffered a loss of motility. An effort to perform the natural movements can never actually be made under such circumstances, no matter how urgently it be desired; for failure is a foregone conclusion. In the case of muscular spasm which has been quoted, it was seen that movements directed to the rigid limb increased the contraction of the muscles, by directing the volition still more forcibly to the part; but when a state of relaxation exists, arising from an enfeebled consciousness of power, such movements are eminently applicable. It will not answer, however, to rely upon kneadings, rubbings, or passive movements, in these cases; for the object should be to direct the volition to the relaxed tissues, and by so doing to correct the false impressions which are transmitted from them to the sensorium. The patient must take an active part in the treatment, while the physician should direct and regulate the efforts which are put forth, so that there shall be a positive result attained, no matter how slight, to convince the mind of the existence of power. It is rarely that complete inability is to be found in these cases; but sometimes it is so nearly approached that we are compelled to commence with the last articulations and slowly advance to each joint in succession; but there is probably no instance of functional derangement of this character so deeply impressed that it cannot be removed in time by a judicious application of the principle which we are considering.

The paralytic forms usually present certain distinguishing features which enable an intelligent practitioner to contrast them with paralyses arising from organic lesions. The onset of the symptoms, together with the presence of manifestations which cannot be referred to any known disease of the nerve-centres or their distribution, is in most instances sufficient to arrest the attention and direct it to closer observation. Where there is inability to use the limbs in walking, it will often be found that the necessary movements can be effected with accuracy and force while the patient is in a recumbent position, and if she be lifted from the bed there will be a considerable amount of power exhibited in the legs in the endeavor to save herself from falling. In cases where there is inability to lift the foot from the bed, a little management will often reveal the fact that the limb is moved in turning the body from side to side, and the patient is also frequently able to raise the body from the bed to the sitting position, without assistance. The voluntary movements are principally affected, the instinctive and unconscious much less so; and, therefore, in treatment we should depend largely on securing the assistance of the latter as a means of gradually affecting the perception and directing the volition to its proper functions. Another peculiar feature in such instances is that the diminished power in the parts affected is often accompanied by increased action in the muscles in the immediate vicinity which are not involved. There seems to be a distinct barrier to the transmission of the will beyond a fixed point. There is seldom any indication of deficient nutrition in the tissues which lie beyond, as compared with the rest of the body; and, though there may be impairment or exaggeration of the natural sensibility of the skin, the electro-muscular sensibility and contractility will be normal. Lastly, the failure to relieve the condition by the usual medication prescribed for the organic affections which are simulated, and the improvement which immediately follows upon treatment directed to the correction of impaired volition and abnormal perception, complete the series of diagnostic points which, under ordinary circumstances, should render a recognition of the true pathology of the affection in question a matter of almost absolute certainty.

But, where functional nervous diseases exist in the uncomplicated and localized forms which have hitherto been considered, the difficulties in diagnosis are slight and the indications for treatment are simple as compared with the instances, too frequently met with in medical practice, in which the manifestations of impaired innervation are more generally distributed. The unfortunate class of "bed-ridden women" is chiefly made up of cases which present the peculiar condition of absence of the recognition of existing power throughout the body, with consequent impairment of volition to a marked degree. This is their distinguishing feature, while the "hysterical" symptoms which often attend it are merely accessory; and no method of treatment can be successfully employed to restore the perverted

* *Psychol. Journal*, April, 1868.

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functions without a clear appreciation of the absence of organic disease, and a direction of the means to the correction of the false impressions which are received by the mind, by demonstrating to the patient the existence of physical powers which she supposes to have been irretrievably lost, while in reality they are merely latent.

Case VI.—A young lady, of a susceptible temperament, in whom the emotional faculties were largely developed, residing in the eastern part of this State, when first seen by Dr. Taylor, in May, 1868, presented the following history. She had never enjoyed robust health, but even as a child had been delicate and incapable of physical exertion. About two years previously a load of care and responsibility had been thrown upon her by the fact that her mother became incapacitated by illness from attending to her accustomed household duties at a time when they were more than usually laborious. Her powers had yielded considerably at the time to the steady, monotonous strain. A trifling increase in her labors was invariably followed by severe headaches, and she began to suffer from weakness and pain in the back. After a few months of this life, her failing strength had received an additional tax from an accidental injury of the head, which had confined her to the bed for several days. Still she had continued in the exercise of her domestic duties, struggling to bear up under her increasing weakness and sufferings, until, in August, 1867, she had experienced a complete prostration of her strength, and had taken to her bed, from which she had not since arisen. The attending physician had pronounced her to be suffering from an attack of spinal meningitis, and had tortured her back with blisters, cups, and setons, with no effect beyond an aggravation of her sufferings. When Dr. Taylor saw her, she was lying in a darkened room, on account of excessive photophobia, and her sense of hearing was so much exalted that a passing footstep occasioned the acutest distress. Her head and back were subject to intense hyperæsthesia, which to a slighter extent pervaded the body and limbs. Her digestive apparatus was completely disordered, and she was consequently much emaciated. She was so feeble that she was unable to raise herself from the bed, and an attempt to effect this on the part of her attendants produced a distressing disturbance throughout her system. A careful examination failed to detect any organic disease, beyond a slight prolapse of the uterus, with a small amount of leucorrhœa; but, as these had originated during her confinement to the bed, they were justly set down as symptoms of general exhaustion. In this case the gradual depression of the nervous force and corresponding impairment in function are clearly traceable to causes in constant action to produce them. The patient is a bright, intelligent girl, of quick susceptibilities, with a delicate organization. She is subjected to repeated strains upon her physical and mental powers throughout a long period, and with each increase in the disturbing causes we observe a corresponding enfeeblement of her vitality, until finally her organs of special sense and digestion, her uterus and her muscular system, become the seats of apparent local disorder, and, succumbing beneath the accumulating burden, she is "bed-ridden." It cannot be supposed that any organ in particular is the chief offender, by attention to which the resulting symptomatic disturbances are to be removed; for treatment directed to this end by able medical men, from time to time, has been futile. But the following treatment has restored her to health. She was told, in simple language, that she was not the victim of any organic disease, but that the morbid sensations and irregularities in function in various parts of the body, which gave rise to so much distress, were mere indications of a profound depression of her vital forces, involving a want of reciprocal action between the functions of the muscular and nervous systems. That the former was inactive, and the latter seemingly in excessive action, were explained to be the natural and usual conditions under such circumstances; and she was shown that treatment could not be applied to any one region to the exclusion of the rest, but must be one which would gradually restore that equilibrium which had been disturbed, and slowly elevate together her impaired forces to their normal relation. Her inability to exert her muscles and to bear the sunlight, her headaches and other symptoms, were accepted as existing facts, and, while no attempt was made to explain them away or to attribute them to an excited imagination, she was assured that they would disappear under a persistent employment of a rational treatment. Her faith in the efficacy of any plan was sorely shaken by the remembrance of the repeated failures which had attended the efforts of her former medical advisers; but this simple explanation of the nature of her condition established at last a feeling of confidence and reliance in her physician, and awakened a spirit of resolution to carry out his prescriptions, which appealed to her judgment and common sense, and did not demand a blind faith in his remedies, as had heretofore been the case. The first step having been accomplished, she was now ready to receive the "movements." She was taught to push with her feet and hands each day against slight resistance, gradually increased, to which was added, after a little, slow stretchings of the muscles. This treatment was continued for about six weeks, during which time the light was gradually allowed to enter the room, and under its use both the general and special hyperæsthesia diminished in intensity, her appetite improved, her strength increased, and her moral tone was greatly elevated. The proper time had now arrived for taking another step in advance, and teaching her to walk again; but unfortunately she was seized with a severe attack of dysentery after the third trial with the braces (July 30, 1868), and an interval of two months elapsed before she had recovered sufficiently to resume the original pushings with the legs and arms. Six weeks were again consumed in recovering the lost ground. On the 16th of November the braces were put on, in the manner already described, and her walks were resumed, with very decided benefit, so that by the middle of February, 1869, she had so far improved in moral and physical strength that she was able to walk without any artificial support, and was brought to our institution to continue her treatment by apparatus which we employ to call forth the exercise of localized groups of muscles. Her improvement was henceforth uninterrupted, and in July she took her departure for the sea-shore, where she passed the summer with her family. She returned to us in January of the present year for further treatment, with the intention of insuring the good effects which had already been attained, preparatory to her marriage, which is soon to take place.

The following case, which is now under treatment, differs from the above in some particulars, but resembles it in the gradual evolution of the symptoms, the similarity of its origin, the complete prostration of the patient, and its steady improvement under the same plan of treatment:

Case VII.—The history which was given, when first seen by Dr. Taylor last fall, was to this effect. As a child, she had never been hardy. She grew up rapidly, and puberty was attained at an early age. At school she had been ambitious to keep up with her classes, but, not being gifted with quick apprehension, she had been obliged to confine herself closely to her studies. In time she acquired an unnatural fondness for sedentary pursuits, which, as she grew up to womanhood, she gratified by acquiring the art of landscape-painting, and spent many hours each day in perfecting herself in an accomplishment which was a source of great pleasure. But a prolonged confinement, unrelieved by the out-door exercises and diversions which are essential to health, bore hardly upon an organization which had never been vigorous, and while a young woman she came to be recognized in her circle of acquaintance as an invalid. About three years before, an aunt to whom she was closely attached was seized with an apoplectic attack, which terminated fatally in a few days, and during her illness the niece was constantly by her side, performing the offices of nurse, with her emotional faculties deeply excited. With the fatal termination of the case came a serious prostration of her powers, and from this moment dates the complete development of a decline which had pursued a nearly constant course up to the time in question. At intervals there had been remissions, more or less marked, in the manifestations of extreme functional disturbance, and about a year previous, after having passed a summer at the sea-shore, she had recovered much of her former degree of health and spirits; but an attempt to assume certain domestic duties, and an enthusiastic devotion to church matters, soon brought her into

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the condition which was presented when Dr. Taylor first saw her. At this time she was able to be partially dressed every day and to sit up in bed; but she could not leave it, partly owing to physical weakness and partly to intermittent attacks of pain in the left leg, located irregularly in the hip, knee, or ankle. Her appetite was fair, but capricious, and her bowels were irregular. The uterus had never become disordered in any way, and, I may state, has remained in a healthy condition up to the present time. The disordered state of her nervous system was manifested by persistent headache, intense photophobia, morbid acuteness of the sense of hearing, backache, and symptoms of dyspepsia, but above all by an excitability under slight provocation, succeeded by excessive depression, which at times assumed the characteristics of paroxysmal hysteria, and had hitherto baffled every attempt which had been made to relieve it. As careful examination of each organ gave absolute proof that no organic disease existed, an opinion was expressed at the consultation that functional derangement of the nervous system had brought her into a condition which would certainly become intensified if it were not relieved by proper means. The principles upon which a rational treatment was to be conducted were explained to her physician in detail, and the case remained under his management. For a few weeks he practised her in pushing with the feet and hands against resistance, with stretchings of the muscles, and was able after a time to get her upon her feet. Unfortunately, his own health failed him when he had reached this point in advance, and he was obliged to relinquish the care of his patient to her mother, with explicit directions for her guidance. But his withdrawal was fatal to further progress; for in three days she had relapsed into the condition which she had presented before the treatment was commenced. Continuing to decline, in a short time her former symptoms were all much aggravated, including the hysterical element, and her muscular power was so far impaired that she was no longer able to sit up nor to use her limbs with any degree of freedom. We are here furnished with an instructive lesson in regard to the relation which should exist in these cases between the physician and his patient. By the exercise of his personal influence he must produce in her a feeling of dependence and reliance, so that she will insensibly yield to his will and judgment on all occasions and enable him to assume an absolute control over her very thoughts and purposes. Without the establishment of this psychological element, all other treatment is of secondary importance. Despairing of his ability to recover the lost ground, under the pressure of a large business, in his feeble state of body, her physician advised her removal to our institution, where she arrived on the 19th of April. She bore the journey of seventy-five miles without injury, though she suffered much at the time, and, after an interval of two weeks to enable her to recover from its effects, the treatment was resumed at the point where it had been interrupted. She is now walking about, and, under the usual system, bids fair to recover entirely.

(To be concluded.)

NOTES OF A CASE

OF LABOR COMPLICATED BY A FIBROUS CORD ACROSS THE OS UTERI.

BY H. Y. EVANS, M.D.

ON January 10, 1869, I was called in by Dr. N. Hatfield to see Mrs. D., æt. 36, Irish, weight 125 pounds, slight build. Third confinement; all previous labors had been tedious. Has been in labor forty-eight hours. Pains constant and good until eight hours since, when she was seized with very severe pains in stomach, followed by vomiting, both of which ceased after the use of carbolic acid. Has had opium and stimulants in abundance. At the time of my seeing her the pulse was 130—scarcely perceptible. Fearfully prostrated; cold sweats, dry tongue, etc. Pelvis small; head fast in superior strait, occiput to the left. Hodge's forceps were applied, and we spent two and a half hours in bringing down and delivering the head. The shoulders were retained for half an hour, but by rotating and using the hook with very great force the body was delivered. The uterus contracted on pressure and expelled the placenta, but the cord was held by something on which we could pull it backwards and forwards as over a pulley, which on examination proved to be a hard fibrous cord of the size of the usual wooden penholder; it was about two and a half inches long, and had firm lateral insertions in the os uteri. The child had been expelled on one side of it and the placenta on the other, and in this way retained the cord. The child was dead before the forceps were applied. It was of full term, and weighed about nine pounds. Not as much blood lost as usual in uncomplicated labors. We used spirits, carbonate of ammonia, etc., by stomach and bowel, but all in vain; the mother sank and died in six hours after delivery.

[Antero-posterior and lateral bands are not unfrequently found in the vagina, but not on the cervix, so far as we can ascertain, unless as a result of adhesions. They are supposed to be either irregularities in the situation and form of the hymen, or else the rudimentary septa of *vaginæ duplices*. Robert Lee relates a case of vaginal band high up (Clinical Midwifery, Case CCCLXVI.), in which there occurred very much the same difficulty in the delivery of the placenta as described above. J. Matthews Duncan (Researches in Obstetrics, New York, 1868, p. 450) gives a long list of references to cases of these hymeneal or vaginal bands. —ED.]

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINICAL SERVICE OF D. HAYES AGNEW, M.D.,

Prof. of Clinical and Operative Surgery.

WITHIN a very short period of time, three cases of rather an unusual form of malignant disease have come under my observation.

Case I.—The first, a Miss H., æt. about 47 years, noticed, four years previous to being under my care, an enlargement of the left mammary gland. The growth, during the first six or eight months, was rapid, and, from her description, the skin or subcutaneous tissue of the breast was œdematous, the nipple was but slightly retracted; there was no axillary involvement, and no pain of any consequence. The general health, as far as she could determine, was not materially affected. After the lapse of eight months the increase in the size of the gland ceased; its surface changed, becoming sun-browned in appearance, and with retraction of the connective tissue of the cutaneous glands to such a degree as to closely resemble the rind of orange or lemon. For a long time she had kept the matter carefully concealed; and it was only when she began to suffer considerable distress that this reluctance to disclose her situation was removed. On examination, I found the affected gland had almost entirely disappeared; the skin was brawny, strikingly in contrast with the contiguous parts; her face was sallow, and general emaciation had set in. The disease continued to extend, invading the surrounding skin. Its progress was marked first by change of color, becoming brown, then contracting and becoming hard as marble, devoid of all elasticity, and resembling very much the cicatricial tissue resulting from burns. The gland soon entirely disappeared, its integument becoming level with the surrounding parts, and nothing but the atrophied nipple remaining to mark its former site. This change of color and hardening of the skin extended up to the clavicle, downwards to the abdomen, and finally through the axilla to the arm, passing down almost to the elbow, and by its contraction pinioning the arm to the side. From the elbow down the parts became œdematous, and in a short time a cough set in, with marked dulness over the lower portion of the left lung, but no expectoration. Her weakness steadily increased, and in a little more than two years from the commencement of the disease death came to her relief.

Case II.—Mrs. G., æt. 48 years, discovered in the right breast, six months before consulting me, a hard swelling. Although

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she was suffering no special uneasiness or pain, yet her mind had been greatly distressed from the moment her attention was drawn to the breast. On examination, I found a hard, somewhat irregular tumor imbedded in the substance of the gland, somewhat painful on being handled, the pain being radiating and lancinating. Two of the axillary glands were enlarged. Her complexion was a dirty yellow, and she had already lost some flesh. She was the mother of two children, the youngest about 12 years of age. Shortly after, the gland was removed by a surgeon. Three months after the operation the disease reappeared in the cicatrix, not, however, ulcerating, but extending as in the case above detailed, the skin becoming brown, then hardening and contracting, and slowly advanced, with remorseless fatality, over the breast towards the other gland, upward in the direction of the neck,—but not extending above the clavicle,—and outward to the arm. The surface over which the disease had passed resembled very strongly smoked bacon-skin. The hand and arm of the affected side became greatly swollen; the appetite failed, and that cachectic aspect so often impressed on the face by malignant disease was very noticeable. Her sufferings and debility were much increased by pain on defecation, dependent on thickening and stricture of the rectum, and very soon by change in the uterine walls. Her suffering became so great that nothing but full doses of anodynes gave her even a moment's relief, and in this state she sank and died, one year and five months from the commencement of her disease.

Case III.—Mrs. ——, æt. 48 years, the mother of two children, enjoying unusual health, and rather inclined to be fleshy, discovered an enlargement of the right breast in the fall of 1869. It was not attended with any severe pain, although occasionally some darting sensations were experienced. In her case there was no sign of any distinct tumor; it was a general and uniform enlargement. Becoming uneasy, she consulted her physician, who at once advised her to see some surgeon, which was done within a few weeks. A short time after, I was desired to confer with her surgeon in reference to its nature and the best course to be adopted. At the time of our consultation the mammary gland was of very large size, firm but elastic; a little change had taken place in the nipple; the axillary glands were sensitive, but not enlarged; the skin was brawny and slightly œdematous over the surface of the gland, but there was no evidence of her system suffering from the disease. Our decision was adverse to any operation, believing its progress would be rapid. She was ordered a preparation of iron and arsenic, and a good diet, with out-door exercise. Three months after, the gland suddenly ceased to enlarge, and commenced to diminish until it had almost entirely wasted away. In four months more the left breast began to enlarge, becoming as voluminous as the right before its atrophy, and then, like it, undergoing this peculiar retrograde change. When the glands had subsided to a level with the general surface and become extremely hard in consistence, dusky in color, and marked with many depressed points, the disease commenced its march towards the neck, abdomen, and axillæ, passing through the same stages of color, induration, and contraction, and attended with severe itching. From the axilla it invaded the arm, contaminating the glands of those regions, and producing, by pressure on the vessels, great swelling of the arm and hands. So great did this contraction become as to incurvate the chest and approximate the shoulders anteriorly, preventing the recumbent position altogether, and interfering so much with the expansibility of the thorax as to produce great difficulty of breathing. The emaciation increased rapidly; the appetite failed, and over the posterior part of the right side of the chest marked dulness existed on percussion, coincident with which there was some cough. In one year from the commencement of the attack the fatal result occurred.

Such, gentlemen, is a brief résumé of three singularly interesting cases of malignant disease, which serve to foreshadow the probable progress and result of the case which is now before you.

Case IV.—This lady is 49 years old, married, and, with the exception of an attack of intermittent and an occasional sick headache, has enjoyed a reasonable degree of health. Four years ago she noticed a slight swelling of the left breast, with shooting pains, excessive itching, and some depression of the nipple. After a year and a half the gland began to diminish, the surface became covered with depressed points, and the color became dark; and now the other gland is assuming the same appearance.

These cases most nearly resemble that form of cancer which is termed lardaceous. The cells rapidly infiltrate the surrounding cellular tissues, and also extend among the fasciculi of the muscles. No operation is allowable: it promises nothing; and the judicious surgeon will save his reputation by carefully abstaining from the use of the knife. It will be observed that the age of the four cases presented is nearly the same, and that in three of the four there was at least rational evidence of the disease seizing upon internal organs. The result of the case, I have little doubt, will exhibit a similar tendency to the wide dissemination of its destructive cells.

HOSPITAL FOR DEFORMITIES AND DISEASES OF THE NERVOUS SYSTEM.

SERVICE OF DR. S. WEIR MITCHELL.

Reported by Dr. Wharton Sinkler, Assistant Physician.

NEURALGIA OF ARM, WITH PARALYSIS AND ATROPHY OF SHOULDER-MUSCLES, RELIEVED BY FARADISATION AND COUNTER-IRRITATION.

S. S., female, æt. 17 years. Has been employed as a weaver for one year, up to three months ago. General appearance that of excellent health. Four years ago, without any assignable cause, she had necrosis of the right elbow. She was treated at the Pennsylvania Hospital, and a portion of the lower end of the humerus was removed. There exists complete anchylosis of the joint; but it did not interfere with her working, and in weaving the greater part of the work is done with this arm. About four months ago she had an attack of tonsillitis, and one tonsil was excised. With these exceptions, she states that her health has been always perfect and all her functions have been performed regularly. About February, 1870, she first experienced pain in the right shoulder; it was not constant, but came on in the evening, after she had worked all day at the loom, and gradually wore off. The pain extended over the outer surface of the arm, from the shoulder to the elbow. At this time she found that the right arm began to get weaker than the other; she was unable to lift it to her head in dressing her hair, and thinks that it hung lower than the other. Neither she nor her mother observed any change in the appearance of the arm, and she continued working as usual. The pain and loss of power gradually increased, the arm becoming painful while she was at work, but the pain ceasing as soon as the work was stopped.

About three months ago she was compelled to stop work, both on account of the severity of the pain and the loss of power in the limb. She was unable to raise the arm from her side, and it hung like a dead weight; at the same time, any movement caused so great pain that she was obliged to hold the arm steady with the other hand. About one month previous to this, the arm began to get smaller and the shoulder flattened.

On September 23, when she applied for treatment in this institution, there appeared to be complete paralysis of the right arm. She was unable to raise it or swing it backwards and forwards; any attempt that was made to move the arm caused intense pain. The deltoid and scapular muscles were greatly atrophied, as well as the muscles of the arm and the pectoralis major. There was tenderness on pressure over the affected muscles and nerves and the bony prominences about the shoulder; but she stated that there was no pain while the arm was at rest. Electro-muscular contractility was entirely wanting in the above-named muscles. Electro-sensibility unusually acute. All the movements of the hand were perfect, with the exception of pronation and supination, which had been wanting since the anchylosis of the elbow; she used the hand in sewing readily; has never had backache or headache.

An application of ol. tiglii and veratrine was ordered to the shoulder and whole arm-surface, and faradisation twice a week.

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The irritation caused by the ointment was excessive; but under it the pain disappeared.

December 13. The shoulder is still flattened, and the acromion prominent to a certain extent; but great improvement has taken place in the appearance of the shoulder; it is larger and rounder; all of the affected muscles have increased in size to a considerable extent. She is able to swing the arm backwards and forwards freely and to raise it about twelve inches from the side without the least pain. There is no pain about the shoulder or arm, except when extreme elevation is attempted. There appears to be a contraction of the muscles about the shoulder-joint which interferes with the arm being raised more than a foot from the side.

Electro-muscular contractility is still wanting. The sensibility to the current is rather greater than usual, but not so excessive as at first.

Temperature of left axilla, ...	100°
" " right "	100°
" " left bend of elbow, . .	96°
" " right " " " . . .	92°

The nerves affected in this case were the supra-scapular, external anterior thoracic, and circumflex. The origin of the disease was difficult to trace, as there did not seem to be any affection of the shoulder-joint, such as sometimes precedes, in scrofulous or rheumatic cases, disease of the shoulder nerves, usually beginning in the circumflex nerve, owing to its relations to the joint. The sudden relief of the intense neuralgic pain was due to the very extensive surface irritated. Pearson, who wrote early in this century, has reported several cases relieved by such means after all others had failed.

DISLOCATION OF ELBOW: REDUCTION IN FOUR WEEKS, FOLLOWED BY PARTIAL PARALYSIS OF THE HAND; RELIEF BY FARADISATION.

LIZZIE W., æt. 18 years. In the end of March, 1870, she fell down-stairs and dislocated both bones of the left forearm backwards, without fracture. The dislocation was reduced by Dr. T. G. Morton at the end of four weeks. There was no loss of power or of feeling in the arm before the dislocation was reduced. She had been sewing without difficulty. About one week after the reduction of the luxation she began to discover loss of power and of sensation in the hand. On November 1, when she came under Dr. Mitchell's care, the case was not improving, and there was complete paralysis of the third and fourth fingers, and feebleness in the others, without much loss of power in the thumb. She was unable to separate the fingers or to extend the last two phalanges when the first phalanges were held firmly in extension. She could only half shut the hand, owing to the great loss of power in the flexor communis digitorum.

Nutrition.—Atrophy existed in the line of the flex. com. dig., but none in the extensors in the forearm. Extreme atrophy in the abductor min. dig. and in the first interosseus muscle. The other interossei muscles were also considerably wasted. Entire loss of sensation was found in the distribution of the ulnar nerve. Sensation was perfect in the radial and median distribution. She states that when she cut the nails of the third and little finger it gave rise to a painful and disagreeable sensation, despite the loss of tact.

Electrical Condition.—There was no electro-muscular contractility in the interossei, and it was lessened one-half in the flex. com. dig. The electro-sensibility was unimpaired.

Treatment.—The forearm and hand were ordered to be faradised twice a week, and particular attention to be paid to the interossei.

December 13. There is great gain in the sensibility of the hand. The size of the abductor min. dig. has increased extremely, and also that of the interossei and flexor muscles. The improvement in the first interosseus is not so marked. The power of movement is greatly improved. She can now shut the hand completely, and the grip is strong, although the electrical condition has improved but slightly, except in the flex. com. dig.

Temperature in the little finger of right hand, . .	90°
" " " " " left hand, . .	84°
" " " palm of right hand, ...	94°
" " " " " left hand, ...	92°

This case is interesting because it illustrates the fact that nerval lesions, after dislocation, are apt to be due to the reduction rather than to the displacement, and that the longer the delay in reducing them, the greater is the risk of nerve-injury. In some cases the injury is immediate; in this one it was not noticed until a week after reduction, perhaps because the arm was kept at rest. The improvement in motor power and in sensibility is so considerable that Dr. Mitchell regards the continued low temperature of the right ulnar region as remarkable.

PENNSYLVANIA HOSPITAL.

A CASE OF SEPARATION OF THE SIXTH AND SEVENTH CERVICAL VERTEBRÆ WITHOUT LATERAL DISPLACEMENT.

Reported by Dr. H. C. Wood, Jr.

P. M., a large and very athletic Irishman, came into the surgical wards of the Pennsylvania Hospital on the afternoon of December 26, 1863 (during my residency), with the following history: An hour or so before, he had been riding upon a barrel in the hinder end of a cart. By a sudden jerk he was thrown out backwards, alighting upon the back of his head and neck. At the time of his entrance his condition was as follows. His intellect was not in the least affected. His head was held in a nearly natural position, but was kept very still, and almost rigidly so. He complained greatly of a fixed pain at the junction of the neck and shoulders. His arms were partially paralyzed, and he was unable to clinch his fists. There was total abolition of voluntary motion and of sensation in his lower extremities. He had violent priapism, without, so far as could be discovered, any seminal emissions. His breathing was rather rapid and labored. Moving his neck greatly exaggerated the spinal pain. From the time of his entrance until his death he never passed any feces, and his urine had to be drawn off by a catheter. There was no marked lesion at the back of the neck, only an apparent want of prominence of the spinous processes. On the morning of the next day, the 27th, he was much the same, save that sensation had in some degree returned to his limbs. The muscles of the extremities were constantly affected with slight twitchings or undulatory spasms of their fasciculi. Titillation of the surface increased these, but did not produce full muscular contractions. His priapism continued, and there was marked tympanites of the bowel. In the evening his breathing was more laborious, and his abdominal distention still more distressing; yet his priapism had disappeared to a great extent, not to return. On the morning of the 28th all his symptoms were exaggerated. He now sank very rapidly, frequently regurgitating quantities of a watery fluid, and died about two o'clock P.M., about forty-eight hours after the accident. His intellect was perfectly clear to the last.

The autopsy revealed a dislocation upwards of the sixth from the seventh cervical vertebra, with fracture of the spinous process of the former. The separation was greater on the left than on the right side, and posteriorly than anteriorly. It was as follows: Measuring behind, at the articular processes, on the left side four and a half lines, on the right side three lines. In front, measuring from the centre, it was two lines. The line of the vertebræ was almost perfectly preserved; for the sixth vertebra did not vary more than a quarter of a line, laterally or antero-posteriorly, from its normal position.

REMARKABLE VITALITY (NEGAR: *Denkschrift zur Eröffnung der Gynäkologischen Klinik*).—Negar details the history of a peasant-woman, 42 years old, who was successfully delivered, at the end of the ninth month, of her sixth child. The placenta was retained, and the accoucheur attempted to remove it, with only partial success; but during the manipulation a loop of intestines protruded into the vagina and was replaced by the physician. The partially-retained placenta was spontaneously expelled in a few days, when the descent of a still larger loop of intestines compelled a second reposition. Complete recovery took place after several weeks.

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THE MEDICAL TIMES.
A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

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MONDAY, JANUARY 2, 1871.

EDITORIAL.

THE ANNUAL REPORT

OF THE SURGEON-GENERAL, AND THE MEDICAL AND SURGICAL HISTORY OF THE WAR.

THE Annual Report of the Surgeon-General for the fiscal year ending June 30, 1870, has been received, and, as usual, is found to contain much interesting information,—more briefly stated, perhaps, than would be desirable to the profession at large, but not more so than is probably necessary for its purpose. Brief as it is, we must content ourselves with referring to but a few of the main topics presented in it.

The Statistics of Sickness and Mortality show a gratifying improvement in the health of the army during the year. The following table gives the principal facts:

	Mean Strength.	Taken Sick—Disease.	Taken Sick—Wounds and Injuries.	Average constantly on Sick Report for Disease.	Average constantly on Sick Report for Wounds and Injuries.	Deaths from Disease.	Deaths from Wounds and Injuries.	Discharged on Surgeon's Certificate of Disability.
White Troops, Nos.	29,022	53,836	8744	1156	263	249	125	745
White Troops, Ratios per 1000 . .	.....	1,855	301	40	9	8	4	26
Colored Troops, Nos.	3,407	5,479	729	146	32	51	15	104
Colored Troops, Ratios per 1000 . .	.....	1,608	214	43	9	15	4	31

We are glad to learn that "the printing of the Medical Volume of the first part of the Medical and Surgical History of the War" is near completion.

"This volume embraces the statistical tables representing the sickness, mortality, and discharges from service on Surgeon's Certificate of Disability, of *white* and *colored troops* during the war, and will be a work of nearly seven hundred and fifty (750) pages quarto. To secure accuracy, the tables were stereotyped as they were finished, and before finally sending them to press they have been thoroughly revised throughout, and every effort made to attain accuracy. With this volume will be bound the appendix to the first part of the Medical and Surgical History of the War, containing the Reports of Medical Directors and other appended documents,—about four hundred (400) pages.

"The whole of the manuscript for the Surgical Volume of the first part of the Medical and Surgical History of the War, authorized by the act of Congress approved March 3, 1869, is now prepared, and several of the more important subjects that would belong to the second volume, as, for example, the tabular statements, discussions, histories of typical cases (with illustrative wood-cuts and lithographs) of twenty-nine thousand five hundred and seventy-two (29,572) cases of amputations, and four thousand seven hundred and seventy-five (4775) excisions, are nearly perfected. Besides this, the surgical statistics of the army for the five years succeeding the war have been consolidated and arranged for publication, and much information has been furnished to authenticate just claims of applicants, and to defeat those that were fraudulent, under the act of Congress authorizing the issue of artificial limbs to mutilated soldiers and seamen. The effect of this law, in bringing to Washington a large number of pensioners to present their claims, has permitted the study of the remote effects of injuries and mutilations. The peculiar value which the surgical data of the late war have acquired in consequence of the measures taken to trace the ulterior results of the more important cases cannot be overestimated. In the reports of the surgery of European wars, and of campaigns in India, Abyssinia, and elsewhere, the history of cases terminates when the men were invalided or discharged. Although the elaborate reports of the casualties of the French armies in the Crimean and Italian wars were published in 1865 and 1869, after an interval of ten years from the conclusion of hostilities in each case, no information is given subsequent to the date of discharge or pension.

"The abstracts of cases in this office are invariably traced to the date of publication."

The continued increase in interest and value of the Army Medical Museum, referred to in the report, is very satisfactory, and, in view of the fact that to support it and continue its usefulness a small annual appropriation is necessary, it is eminently proper that the attention of Congress should be directly called to the estimation in which it is held by scientific and professional men. The immense amount of material of great interest and value which it contains should be made available by publication of descriptions and reports with as little delay as is consistent with their proper preparation; and there ought to be no hesitation or delay in granting the authority and means necessary for this purpose.

For example, it is stated in the report that

"The collections now include eight hundred and ninety-seven (897) human crania, and thirty-four (34) skeletons. Elaborate tables have been prepared, exhibiting their measurements. The diameters, facial angle, internal capacity, and position of the *foramen magnum* are indicated for each cranium. It is hoped that the publication of this important contribution to anthropological knowledge will be authorized by Congress. The tables, arranged to correspond with those published in the *Crania Americana* of Samuel George Morton, would worthily supplement that great work. The museum possesses a larger number of skulls from tumuli, and of crania of North American Indians, than are elsewhere collected; and it would appear due to ethnologists throughout the world that descriptions of the specimens should be published, as was done by the Russian government for the collection of Professor von Baër at St. Petersburg."

The publication of the tables and descriptions referred to is very desirable, and the authority requested should be granted at once.

The reports already published in the form of the well-known circulars from the Surgeon-General's office have been most highly appreciated in all quarters, as appears from a brief memorandum of extracts from letters and reviews relating to them, which accompanies the report, having been drawn up for the information of Congress as being the best argument in favor of their continuance. The very great liberality with which these publications have been distributed in

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this country is no doubt the main reason why they seem to be less appreciated here than in Europe, for the value of a thing in our eyes is often in proportion to the difficulty of obtaining it. Already the experience gained by the medical department in this country has been made available in Europe. We read of hospital steamers and hospital railway-cars as being used by the Prussians; the American Pavilion Hospital has received universal commendation, and been generally adopted as a model; and the system of organization of our army medical corps has been followed by more than one nation in the Old World.

The speedy publication of the data prepared for the Medical and Surgical History of the War depends now upon Congress; and we trust that it will not adjourn without providing for it. No nation has ever possessed in its archives such abundant material for a complete medical history of a great war as has been accumulated by the indefatigable zeal and admirable system of the army medical corps during our late protracted civil war. We feel, therefore, that it is of the utmost importance that ample appropriations should be made to insure the speedy preparation and publication of this great and truly national work, which will be not only a monument to the genius, skill, and energy of American army surgeons, but a collection of facts of incalculable value to the medical profession throughout the world.

We have only space to note one other point in the report; but that is an important one.

There are now 48 vacancies in the medical corps, and, as the law stands, these cannot be filled.

On the 30th of June, 1870, there were 147 commissioned medical officers available for duty with troops, 4 on leave of absence, and 4 on sick-leave. There were 217 military posts, besides numerous detachments, each requiring a medical officer. The deficiency was, of course, supplied by hiring contract surgeons, which is neither economical nor satisfactory.

It certainly cannot be the intention of Congress to cripple and damage the medical corps of the army; but that must be the result under the present system. We hope that the recommendation of the Surgeon-General and of the Secretary of War in regard to this matter will have the desired effect, and that the law forbidding promotions and appointments in the medical staff will be repealed during the present session.

THE UNITED STATES PHARMACOPŒIA.

No. II.

IN reading the history of our national standard, there is one peculiarity visible in every line, that must strike any one familiar with the world's Pharmacopœias. All others are governmental in their origin, hemmed in and enforced by decrees of parliament or of king, whilst our standard is essentially voluntary in its source and authority,—dependent for the one on the unpaid labor of a few medical gentlemen; for the other, on the good sense and submissiveness of the profession at large.

It is a subject for serious consideration,—a subject growing in gravity as the area and power of our civilization grow,—how far the national code is in reality accepted, and how it shall be possible to bind together Boston and New Orleans, Philadelphia and San Francisco, by one common recognized standard. It is *a priori* very probable that the machinery sufficient to hold together the American profession when it was huddled upon the eastern slopes of the Alleghanies will not be powerful enough to control widely separated sectional habits and interests. It is a significant fact that at the meeting of the convention of revision, last spring, there was not a single delegate present from farther south than Richmond, and none from any place in the vast territory west of the Alleghanies, save only some pharmaceutists from Chicago. The acceptance of the Pharmacopœia never has been sufficient to insure safety to our travelling patients. Thus, even to the present time, many of the New York druggists habitually put up Magendie's solution for Liquor Morphiæ Sulphatis. We have known a number of nearly fatal mishaps from this, and have no doubt that death has actually been caused by it. More than this, it is notorious that disregard of the U. S. Pharmacopœia is increasing rather than decreasing, so that, in truth, very many of the processes of the last edition have been everywhere abandoned, and the rapid strides of pharmacy and practical medicine have brought into universal use numerous preparations and remedies which are not officinal. The fluid extract processes of the last edition were mostly excellent, but they were founded upon cheap alcohol. The sudden war, and consequent mildew of enormous taxation, occurring directly after the book was published, so advanced the price of the menstruum as to make the processes ruinously expensive, and all druggists were forced into the adoption of plans cheaper than the officinal. On the principle of one step leading to another, no doubt this, under the pressure of competition, has been followed in many instances by a general looking for cheaper processes. The last convention wisely provided for such emergencies by decreeing that the committee of final revision should be a perpetual one, and have power, after the issue of the revised Pharmacopœia of 1870, to alter its processes and adopt new preparations or remedies by announcing the same in the journals. There will be, therefore, no excuse in the future for the officinal standard falling so lamentably behind the times.

Unfortunately, however, no resolutions can touch such cases as the action mentioned of New York druggists, who, to us, seem to be morally guilty of manslaughter in their recklessness. It would, very possibly, be a point of some nicety to decide how far their legal accountabilities would extend in case of a death occurring and the matter being brought into court. The good of the country, we think, requires, however, that this should be no nice point,—that the law should say plainly and emphatically that a druggist causing

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death by putting up a non-officinal for an officinal preparation was guilty of manslaughter. The day is rapidly approaching when, as in England, wealthy patients will be continually going to the medical centres for opinions; and shall it be that the harmless officinal prescription written in Philadelphia shall become transformed into an instrument of death by a journey across New Jersey of less than a hundred miles of rail? We think the time has nearly, if not fully, come when Congress should be asked to give legal authority to our national standard. Such law need not encroach or in any way interfere with the commercial rights of any; in no way should it influence the manufacture or sale of patent medicines, elixirs, or other special preparations. It would be sufficient, we think, for it to consist of two parts: the one giving legal sanction to the revisory convention and its committees as at present appointed and governed; the other requiring of pharmaceutists that when any preparation be called for under the officinal name, it should be prepared in accordance with the officinal standard. Thus, the druggists should be allowed to put up *only* the officinal solution when Liquor Morphiæ Sulphatis is called for, and the physician who wants Magendie's solution should be forced to write for it by another name. There is such reasonableness in this that we think Congress would readily pass a moderate law, were it memorialized by the various medical societies and colleges throughout the land.

To call attention to this matter,—to excite, if possible, discussion in the medical journals, so that at last action may be taken by some body or bodies,—is the object of the present editorial. If it fail in doing so, it will be but bread cast upon the waters; and, although neither a prophet nor the son of a prophet, we fear lest the day may come when, by very confusion and vexation, the profession will be forced to look into the subject seriously, and to attempt a reformation, now easy, but which then will be a veritable cleansing of Augean stables.

NECROLOGY OF THE PAST YEAR.

THE year 1870, though dead, will long live memorable for the loss of distinguished representative medical men. In its literary walks and its fields of professional culture the medical world will hereafter date from the few months past the deaths of illustrious physicians and surgeons who in their lives graced and adorned them. It is a striking evidence of the fraternal spirit that exists among professional men the world over, that when death invaded this brilliant circle of intellect, genius, and skill, the loss was almost as keenly felt on this side of the Atlantic as it was in the countries honored in their valuable lives. But few of these deaths occurred outside of Great Britain, and, oddly enough, almost all of them during three months of the early summer.

Of the eminent men thus lost to science and the world, SIR JAMES YOUNG SIMPSON, who died on the 6th of May at Edinburgh, was the representative of a class of writers, practitioners, and discoverers—alas! too few —who, as was truly said of him, unite to accurate perception and the faculties of induction and almost intuitive generalization a spirit of fearless self-sacrifice, a never-satisfied curiosity, and an indomitable love of work. His practice was immense, and for thirty years taxed his energies almost to the point of extreme endurance, yet he found time to enrich medical literature with numerous original contributions and additions. He was distinguished as a lecturer and an antiquarian, and was endowed with the personal gifts and attributes of greatness. He will always be gratefully remembered as the fearless introducer and advocate of the use of chloroform in obstetrical practice. For this was he honored while living, and the good he has done will not be all "interred with his bones."

THOMAS NUNNELEY, who died early in June, was one of England's best provincial surgical practitioners and observers. He practised his profession in Leeds, but his physiological and surgical contributions to literature were familiar to cisatlantic readers as the emanations of a man of observation and experience.

AUZIAS-TURENNE, who died in Paris on the 29th of May, was a striking illustration of the fact that a man may devote almost a lifetime to the pursuit of one idea, involving numerous original inquiries and investigations, and yet die and leave the world to regret that so much intellect, energy, skill, and perseverance had not been given to objects of really practical importance. He was celebrated as the originator and advocate of syphilization and of the theory of the communicability of syphilis to animals.

SIR JAMES CLARK, who died June 29, was well known in more than one walk of the profession. His work on Climate was a sound, clear, and carefully-written treatise. As a practitioner he won general confidence, and for a third of a century preserved the friendship of his sovereign, who honored herself in selecting as her professional adviser a man so distinguished for his judgment, moderation, and integrity. A writer in an English medical serial has remarked that "when the modest grave at Kensal Green received the remains of James Clark on July 4, it closed over one of the best men who ever lived."

The death of Edinburgh's illustrious surgeon, JAMES SYME, took place on the same day. He too, like Simpson, his fellow-townsman, had for a long series of years overtaxed the energies of a vigorous intellect. He was the author of systematic works on surgery and of numerous valuable surgical monographs, was for nearly forty years Professor of Clinical Surgery, and will long be remembered as an expert and skilful operator who stood in the very first rank of his profession. Many important operations are said to have been performed by him for the first time in Great Britain; among others, those for excision of the upper jaw, disarticulation of the clavicle from the sternum for the removal of a tumor, subcutaneous section of the sternomastoid for torticollis, etc.

DR. JAMES COPLAND, the author of the great "Dictionary of Practical Medicine," died July 12. His fame

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will rest on his literary labors, which were very extensive, and included contributions to journals and to general literature on almost every branch of medical science. He received altogether from twenty-five to thirty thousand dollars for his dictionary, the publication of which was the work of nearly thirty years. The writer of this article well remembers, in a social visit paid in 1857 to this distinguished author and genial, hospitable conversationalist, the bantering manner in which his friends dated future events from the time when the dictionary was to be finished,—for it had already lingered along for more than a quarter of a century and was still uncompleted,—and the doctor's appreciation of the honor done him by the American publication and diffusion of this monument of his erudition, mingled with a not inconsiderable amount of sensitiveness at the piracy from which he was then deriving no pecuniary recompense. It is to be regretted that he did not live to give to the world the autobiography on the preparation of which he had entered not long before his death.

Prominent in a special branch of professional investigation and practice was ALBRECHT VON GRAEFE, of Berlin, who died July 20, at the early age of forty-four. Ophthalmic surgery then lost its chief ornament and exponent; for he was a bold, skilful master-operator, with abundant knowledge, self-reliance, and self-confidence, who, while crowning with success his own labors, was ever ready to devise improved methods to assist others, in all future times, in their delicate surgical interference with the eye. He is best known for his originality in suggesting and his skill in employing iridectomy for the relief of that very intractable affection, glaucoma. He literally succeeded in opening the eyes of the blind; and for this, if for nothing else, his name will descend to posterity blessed with the enthusiastic admiration and affectionate remembrance of mankind. In face he is said to have so strongly resembled the traditional likenesses of our Saviour, that he was rather irreverently called Christus by the German students.

Several other deaths occurred abroad during the year among those who had devoted their talents and their lives to the pursuit of medical knowledge. We may briefly mention among these the names of JOHN ZACHARIAH LAWRENCE, celebrated as a writer on ophthalmology, who died July 18, and EDWIN LEE, the author of a valuable work, often quoted, upon the baths and watering-places of Europe, who died in June.

We do not dismiss the consideration of the losses sustained at home by the American medical public with a brief mention, from any want of appreciation of the services rendered to literature and science by those who died here during the year; but we feel that, though the reputation of some of these was national, their local status in the great districts of country in which they taught, wrote, and practised almost overshadowed it. The great West is especially identified with the professional history of DR. BENJAMIN W. DUDLEY, who died last January, at the age of fourscore, after a life devoted to surgical teaching and surgical practice, lithotomy being one of the important operations in the successful performance of which he won great distinction. DR. CHARLES A. POPE, whose life so abruptly terminated in Paris last July, was another Western teacher and practitioner of the first standing in his profession, and for years was recognized as one of the ablest surgeons in that section of country. DR. LEONARD MARSH, who died August 16, had been for fifteen years a professor in the University of Vermont, and was therefore more directly connected with the progress of medical science in the far East. DR. GEORGE C. M. ROBERTS, Emeritus Professor of Obstetrics, etc. in the Washington University, Baltimore, who died in January last, was in like manner identified with the interests of medical teaching and practice in an entirely different section. We do not intend to draw the inference that medical science or the reputation founded on its active pursuit can or ought to be purely sectional, but that to gain a fame that will pervade every region of this vast country and thence be borne to distant lands requires a large share of the qualities of mind and the culture that have made the names of Simpson, Copland, and others familiar to every professional man in this country. DR. GUNNING S. BEDFORD, who died on the 5th of September, was, as is well known, a teacher of medicine for over a third of a century, one of the founders of the University of New York, author of valuable works on obstetrics and the diseases of women and children, and a successful practitioner in that specialty. There are, doubtless, many others of less prominence in the profession who have died during 1870, here and abroad. It is but justice to some of them to say that in their more limited circles of usefulness they probably had the opportunity of accomplishing even more good to their fellow-beings than some of those of greater distinction.

We stand on the threshold of another year, like pilgrims starting on an unknown journey, who turn but for a moment to gather, from the examples of those who have preceded them, useful lessons for their own guidance.

CORRESPONDENCE.

DERMATOLOGY ABROAD.

LETTERS FROM L. A. DUHRING, M.D., OF PHILADELPHIA.

No. III.

LONDON, July 10, 1870.

ENGLAND, the home of Willan and Bateman, and, since their day, of many other earnest and hard workers in the field of dermatology, must ever hold an important position in this sphere. The interest that once inspired such minds still exists, and that it may take even deeper root must be the wish of every man interested in the advancement of science. The English dermatology of 1870 is a fixed school of its own, with but little of the foreign element, and as such deserves careful study. In addition to a few data relative to the institutions for diseases of the skin in Vienna and Paris, I shall now give a summary of the principal hospitals and dispen-

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saries in this city. Almost all of this practice here is conducted through dispensaries, such an institution as a hospital devoted to these affections being unknown. At the corner of Blackfriars Bridge stands the building called "Hospital for Skin Diseases," founded about thirty years ago through the liberality and exertions of Mr. Startin, a gentleman whose name has long been associated with this branch of medicine. This institution is in the hands of able managers and well-known physicians, but, for want of funds, amounts only to a large dispensary where patients come daily to receive advice and medicine. There are but six or eight beds in the hospital, and these generally vacant, though the dispensary practice connected with the establishment is a large one, the average attendance of patients being from one hundred to one hundred and fifty daily. The medical staff is represented by Messrs. Hutchinson, Sims, and Nayler, each having certain days of the week when they hold their examinations. As a rule, two hours of an afternoon are given by these gentlemen to the dispensary service, and in this limited period one hundred cases are seen and cared for,—some of them new, others old. Generally the patients return in eight days, though occasionally, when the case happens to be a grave one, they are told to come back in three days. Upon the whole, there is but slight endeavor made to study the disorder,—in many cases the examination resolving itself into an inspection for the purpose merely of making the diagnosis; this done, the case is hurriedly disposed of, to make room for the next. The attendance being so large, it becomes an impossibility for the limited number of physicians to give the time and attention that cases often deserve. At this hospital there is no instruction whatever given, nor is this vast material at all made use of by the students. In connection with University College Hospital there is a department for diseases of the skin, under the charge of Dr. Tilbury Fox, whose valuable contributions to dermatology are so well known. Here from fifty to seventy-five patients are seen three times a week, and treated as dispensary cases. Unfortunately, in this well-managed hospital only two beds are appropriated to the department for diseases of the skin. At the dispensary, Dr. Fox meets his class of students upon certain days and gives them a clinical lecture on cases as they chance to present themselves, adhering to the doctrines set forth by himself and the English school generally. Connected with Guy's Hospital there is a like dispensary department, conducted by Dr. C. Hilton Fagge; and St. Bartholomew's, Charing Cross, and the London all possess similar chairs. "The British Hospital for Skin Diseases" is also a dispensary, under the care of Mr. Squire. This institution, too, like the "Hospital for Skin Diseases," must content itself with the dispensary service until sufficient funds be raised. These that I have just referred to, I believe, are the principal corporations of the kind in London, all being maintained by voluntary contributions; and, indeed, the same may be said of all the charitable institutions and hospitals of London, excepting those that are endowed. Thus it is that the workers in dermatology are cramped in their endeavors to progress and elevate the study to its proper position. Material enough, but unfortunately no hospital where disease can be treated and studied. From the foregoing remarks it will be seen that the treatment of this class of diseases throughout London is mainly dispensary, and it is upon such practice that the English school founds its therapeutics. It will scarcely be questioned that having cases under care in a hospital is a more speedy method of curing disease; but neither must the good done by a judicious dispensary treatment be underrated. London, not having a hospital devoted to this purpose, accepts the next best measure, and throws her strength into dispensaries. Again, to draw a comparison, the lack of regular courses of lectures and of clinical opportunities makes it inferior as a school to Vienna or Paris, although, as said of Paris, to one grounded in the rudiments of the subject, the various dispensaries offer some rare and interesting material. Professor Erasmus Wilson, whose name has so long been associated with dermatology, and whose works are so universally known, holds the chair of Dermatology in the Royal College of Surgeons, and there delivers a course of lectures through the spring season; but these, I imagine, are intended more for the ears of the initiated than the student. In referring to the College of Surgeons, I cannot omit the beautiful collection of models of skin diseases, made by M. Baretta, of Paris, and recently presented to the College by Prof. Wilson. They are lifelike, and portray the diseases in a most striking and accurate manner. Many of the models are duplicates of those in the St. Louis Museum, and are furnished with full notes and remarks. In consequence of the scattered condition in which dermatology is found in London, it is most difficult to form a correct idea of this department. The institutions are situated at such enormous distances from each other that it becomes an impossibility to visit more than one dispensary a day, and then, as most of them only have certain days weekly on which such cases are seen, much time is necessarily lost. Yet, by giving two or three months of daily attendance at one or two of the hospitals, a fair estimate of English dermatology may be obtained. Curious as it may appear, there exists to-day in England a strange ignorance of the leading features of the French and German schools; and especially is this true regarding the treatment. England, like France, holds herself aloof from Germany, and seems to say, Pray, how can there be anything better than this method that we have employed for the last half-century? Eminently conservative, she looks upon innovations suspiciously, and is thus debarred from the improvements made from time to time in Germany. The contrast is very striking to one coming direct from the centre of dermatology. Diseases of the skin are not studied in that thorough routine manner so noticeable in Germany; nor is due credit given the Germans for what they have accomplished in the last twenty years. The doctrines of dermatology as set forth by English writers of the present day are not based upon recent investigations, but on those advocated years ago, and many of them abandoned by other nations. In England, as in France, great attention is paid to the internal treatment of this class of affections, amounting, in many cases, to a total disregard of the external symptoms; and this, I think, may be set down as one of the characteristics of the English school. Now, according to the views of many, there can be too much attention to internal treatment, and not enough to external. Provided the pathology of the disease in question be understood, and means are possessed that will operate with some degree of certainty against the trouble, internal treatment is of great value; but where the pathology is involved in obscurity, and where a drug is given with no positive knowledge of its mode of action, used empirically, there is danger of falling into error.

If I can judge from personal observation in England, too little regard is given to the external treatment of disease,—

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patients often being dosed with medicines for months, where with an external treatment the difficulty would yield kindly in a much shorter time. In the present state of our knowledge, the pathology of many diseases of the skin is too obscure to admit of an internal treatment with a view to a positive result; and until the cause is more fully understood internal treatment can never assume its proper position. But, to return to facts, let me state that there are certain diseases which occur much more frequently in England than elsewhere, and of these psoriasis is an example. Hebra noticed long since that psoriasis, as a rule, occurs in persons of a strong build and good nutrition,—those who would be called in excellent health and condition, with no trouble except the eruption. Now, whether it is that England contains more psoriatic cases because the physique of the English race is fine, or whether its prevalence is due to other causes, is a question worth noticing. According to the report of Mr. Erasmus Wilson, in his "Statistics of Cutaneous Disease among the Wealthier Classes," lepra or psoriasis occurred 628 times among 10,000 cases, or one in sixteen; whereas in Vienna, at the General Hospital, the proportion is one in sixty. It has long been a question open to discussion whether diet has any effect upon psoriasis. Cases are on record where cures are said to have resulted from the use of meat-diet, while in others milk-diet is said to have proved beneficial, and again in others no diet has proved of avail in ameliorating the disease. Nevertheless, the fact that psoriasis occurs so much more frequently in England than elsewhere directs attention to the mode of life and diet, and suggests that the stimulating, heavy food and malt liquors so largely consumed may possibly produce effects upon the economy leading to the formation of the psoriatic eruption.

Great confusion exists at the present day in the nomenclature regarding this disease, some dermatologists adhering to the word Lepra, some using Psoriasis, whilé others have found a new name for it,—Alphos. In Germany this affection is universally called Psoriasis; but in England opinion is divided between the three names. Hence there is always a doubt what name to give, for fear of being misunderstood. Leaving the question of antiquity, as urged by some of the dissenters, out of the argument, it seems best to select the term which is most generally known and recognized the world over, in order that writers in all countries may be understood. In Prussia, Austria, Italy, France, Russia, and the other continental countries, the word used is Psoriasis, nor is any other word understood as designating this disease,—so that in England and America only does this useless confusion exist. The name, indeed, is of small import, as long as we know of what we are talking; but that one should be adopted and acknowledged is absolutely essential for the promotion of science. To call a disease Alphos and Lepra in one country and Psoriasis in another inevitably leads to confusion, and demonstrates clearly enough the disadvantage of an unsettled nomenclature. During my previous visit to this city, my attention was directed to a disease first described by Tilbury Fox under the name of Impetigo contagiosa. It is of an impetiginous or eczematous nature, as implied by its name, runs a course singularly its own, and differs from ordinary Eczema impetiginodes in its easy inoculability. It is a light disease, generally attacking children, having a short but definite course, and easily amenable to treatment. I have never noticed this particular form of disease on the Continent, and at the same time may state that its nature is not yet definitely understood. Elephantiasis græcorum, or Leprosy, is now and then met throughout England, and especially in London among the returned sailors and soldiers of the India provinces, who are doomed to carry this horrible malady throughout life. Active steps have recently been taken to investigate this singular and interesting disease, in the hope of arriving at some definite conclusion as to its nature; and, having had the whole material of the British eastern provinces to draw notes from, the report of the committee cannot fail to excite interest. The different Tinea diseases are all met with in England, Favus being by far the rarest. Mr. Erasmus Wilson is, I believe, the only dermatologist who denies that the Tinea affections are produced by a fungus. Mr. Wilson opposes the generally received view, and states that there is no vegetable parasite or fungus present at all in these diseases, but that what is commonly called fungus is "*granular degeneration*," conveying the idea of an arrest of development of the cell-tissue of the epidermis at its embryonic stage, and the production of a tissue constructed of crude and imperfect material. This explanation of the Nosophytodermata, as Mr. Wilson has termed the group, was advanced by himself some years ago; but, however ingenious the theory, it has received very few supporters.

In conclusion, it has been my aim in these letters to give a short and concise sketch of the subject as existing in the Old World, to present to those concerned the opportunity of taking a general view of what is going on, and of becoming acquainted with a few facts. Allusion to the syphilis hospitals and dispensaries has been purposely omitted in these few pages, considering the Midi, Lourcine, Lock, Berlin Charité, Vienna Allgemeines Krankenhaus, and the Naples Syphilocomia as each offering material sufficient for instructive remarks, and that to have referred to them casually would have been injustice. Leaving criticism, and the many points of interest that time and space have prevented speaking of, for other hands, I take leave of the subject, with the ardent wish that the future dermatology of America may go hand in hand with that of Europe, and that it may rapidly assume a rank equal to that which it holds in the countries of Plenck, Frank, Simon, Baerensprung, Alibert, Biett, Rayer, Willan, and Bateman.

REVIEWS AND BOOK NOTICES.

VON OPPOLZER'S VORLESUNGEN ÜBER SPEZIELLEN PATHOLOGIE UND THERAPIE. Bearbeitet und herausgegeben von EMIL RITTER VON STOFELLA. (Oppolzer's Lectures on Special Pathology and Therapeutics. Prepared for publication and edited by Dr. Emil von Stofella.)

No. II.

In a brief review of this work which appeared in the number of this journal for November 15, we called attention to its general excellence, and especially to certain points in the diagnosis and treatment of diseases of the heart and blood-vessels which we thought novel. In the second half of the first volume, which has just come to hand, the various diseases of the respiratory organs are considered; and it is our purpose in the present notice to give, so far as our limits will permit, an analysis of the author's views in regard to the pathology of the diseases usually classed together under the head of pulmonary tuberculosis. We make this selection not because we think the chapters devoted to this subject of pre-eminent merit, but because his views, nearly identical with those of Niemeyer and Waldenberg, are almost universally accepted in Germany, and, as it seems to us, only to a very limited extent in other countries. The excellent translations

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of Niemeyer's works, and an admirable review of Waldenberg in the *American Journal of the Medical Sciences*, do not seem as yet thoroughly to have aroused attention to the fact—and we say it with a due sense of what we owe him for the introduction of the physical methods in the diagnosis of phthisis—that an unquestioning faith in Laennec's opinion that the peculiar lesion of phthisis consists in the deposition of tubercle, or of an adventitious product in the lungs, has done much to retard pathology. Oppolzer, in common with Niemeyer and Waldenberg, holds that the deposit of tubercle, so far from being a common occurrence in phthisis, is very rare, and that many cases of phthisis run their course without the patient becoming at any time tubercular. True tuberculosis may, it is true, be developed from pre-existing phthisis; but there are other conditions which generate it, and these will be more particularly referred to later in this notice. The peculiar caseous matter with which the lungs are infiltrated in phthisis is not, as has been generally supposed, softened and degenerated tubercle, but, in the greater number of cases, the degenerated product of an antecedent pneumonia. Now, the pneumonia which is most apt to be followed by this result is not that form to which we generally give the name of sthenic idiopathic pneumonia, and which the Germans call *Pneumonia crouposa*, but a form in which the exudation is not fibrinous, but is viscid and presents some similarity to mucus. In adults this form of pneumonia evinces a special preference for the upper lobes, and generally arises from the extension of inflammation from the bronchi to the air-cells. In children there has not been observed this tendency to localization, but any part may be invaded by it; it is especially liable to attack lobules affected with atelectasis, and, in fact, constitutes the most frequent form of lobular pneumonia. The morbid appearance of a lung affected with what is called *Pneumonia catarrhalis* may be thus briefly described. In the beginning, the inflamed part is of a violet or reddish-brown color, and its cut surface does not show a trace of granulation, but is compact and dense; later, the hyperæmia disappears, and the microscope reveals an increased rapidity of cell-growth; still later, a change of color takes place, and the inflamed part becomes yellowish-gray,—a change which is in large measure due to fatty degeneration of the newly-produced cells before alluded to. At this time the consistence of the lung will be found to be diminished. If the further progress of the case is towards health, the exuded materials will be absorbed, and the part will return to its former condition; but in many cases this favorable result does not take place, and the exudation, instead of undergoing the fatty degeneration, is transformed into a caseous substance; or, in other words, the caseous degeneration takes place. Now, although it is the catarrhal form of pneumonia which in the great majority of cases is the forerunner of phthisis, it is to be noted that the croupous form may occasionally, under certain circumstances, be followed by this disease; and perhaps still more rarely blood effused into the bronchial tubes and air-cells is capable of undergoing itself, and of inducing in the surrounding tissues, similar changes. Caseous degeneration may also affect cancerous masses, the contents of abscesses, and even miliary tubercles. In the beginning of the degeneration, as it affects, for instance, the exudation in catarrhal pneumonia, the cells and their nuclei, if a microscopical examination be made, will be found to have become contracted, and the cells to have a tendency to arrange themselves in masses,—effects, probably, of the withdrawal of water and of the mutual interference with nutrition which so large a number of cells must occasion. When the degeneration is still further advanced, a section of the inflamed part will be reddish-gray in color and present a dull, granular appearance; still later, yellow points, indicating commencing caseous degeneration, are to be seen, and the mass, even when much compressed, exudes only a small quantity of a tenacious, viscid, and gelatinous liquid. As the disease advances, the yellow points multiply, so that the part at last loses its red color, and the exudation, in consequence of softening, again becomes liquid, and may be eliminated. As the nutrition of the tissue of the diseased part has, however, suffered, excavations or vomicæ are frequently thus formed, although when originating in this way they rarely attain a very large size. Together with these changes there is observed a rapid development of connective tissue, which is found to have a great influence upon the further progress of the disease, whether it be favorable or unfavorable; for by it the ulcerated part of the lungs is separated from the healthy part, and in this way a limit is set to the further extension of the disease, and, as Oppolzer believes, to the absorption of the caseous matter and to the development of tuberculosis. On the other hand, if the development of connective tissue be excessive, we shall find the parts of the lungs affected to have a more than normal density, and in many cases to be traversed by fibrous bands. Of course, connective tissue developed in the lungs must sooner or later cause contraction; and in this way are to be explained the bronchial dilatation which so frequently occurs, and the depression of the supra- and infra-clavicular spaces. The dilatations of the bronchi sometimes exist to a marked degree, and, it is believed, are frequently mistaken for excavation.

Tuberculosis or miliary tuberculosis is a disease distinct from the above, and is generally due to the absorption of some of the caseous matter previously described. It may be produced artificially by the inoculation not only of this caseous matter, or of the sputa or blood of a phthisical patient, but of various other substances; and the same result will be observed even after these substances have been treated with such powerful reagents that any vital or chemical property they may be supposed to possess must have been destroyed, provided, however, that their corpuscular elements have not been altered by the reagents. If, however, the corpuscles, under the microscope, present a shrivelled appearance or are broken up, the experiment will not be successful. Waldenberg has still further demonstrated that the inoculated elements are taken up by the lymph- or blood-vessels, and after circulating with the blood may be deposited in various parts of the body, where, if they have been colored with aniline blue, they may be recognized even in the tubercles themselves. If we admit that tuberculosis follows the introduction of corpuscular elements from without, there can be no reasonable objection to the acceptance of the hypothesis that this *infection* or inoculation may sometimes be due to the absorption of corpuscular elements contained within the body, it matters not in what pathological process they may have originated. These, when absorbed, act as foreign bodies, and cause within the blood-vessels a derangement of the circulation, which may in some cases amount to partial stasis. As a consequence of this, there is an extravasation of a number of the white corpuscles of the blood, which generally carry with them these foreign bodies, and, collecting together in a mass, form the basis of a tubercle which is completed by the growth of a capsule of connective tissue around them. It will be seen that in this view tubercle is very analogous to the products of inflammation.

As we have already stated, the caseous degeneration of the lungs more frequently gives rise to tuberculosis than any other condition. Next in frequency stands caseous degeneration of the lymphatic glands; but it is to be recollected that tuberculosis may develop itself from caries or necrosis of bones, from suppurative coxalgia or otitis, or from diseases giving rise to ulceration, as ulcer of the stomach, ulcer of the larynx, and typhoid fever, or even from a previous attack of tuberculosis, the tubercle, like many other products, being itself susceptible of the caseous degeneration. It appears that the caseous masses are capable of undergoing the fatty degeneration, and in this condition may be absorbed without disadvantage to the person affected, the normal tissue of the lungs in these cases being replaced by connective tissue.

The manner in which phthisis begins is shown to be different, in many cases, from that described in the text-books. Thus, it is said not to begin with a dry, hacking cough, but almost always with the symptoms of catarrh, and with more or less expectoration; and it is singular that, while it has long been recognized that certain diseases—as, for instance, measles and hooping-cough—are very frequently followed by phthisis, the special influence of the catarrh which is a necessary accompaniment of the latter disease, and by no means infrequent in the former, has been persistently ignored. In the same way, it has long been known that workmen whose occupations require them to remain in rooms filled with dust are very apt to suffer from bronchial catarrh and from phthisis; but it has

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occurred to but few that these two diseases stand in the relation of cause and effect.

It has been shown also by Niemeyer that the part played by hemorrhage in the history of phthisis has been entirely misunderstood. He has shown that it is by no means so grave a symptom as has been generally supposed, its influence even being, in a certain number of cases, salutary, and that, so far from being a symptom of fully-formed phthisis, it very frequently causes the development or aggravation of the disease. As has been already pointed out, the blood which remains in the bronchial tubes and air-cells undergoes itself the caseous degeneration and causes a similar change in the products of the inflammation excited by its presence. He has, moreover, asserted that an increase of fever and an extension of the disease almost invariably follow a hemorrhage. The writer of this notice, desiring to test the truth of this statement, and having under his charge two patients with phthisis in whom hæmoptysis frequently recurred, directed that thermometric observations should be made, morning and evening, in each case, for a few days after the occurrence of a bleeding. There is always an elevation of temperature; and it may be noted that the physical examination of their chests was not wholly confirmatory of the correctness of Niemeyer's opinions.

Other points are, of course, more or less fully discussed by Oppolzer; and we regret that space will allow us to allude only to a few of them. In regard to the question whether phthisis and tuberculosis are hereditary diseases, Oppolzer replies that strictly neither of them can be so considered, and that all that can be said to be inherited is a certain predisposition or vulnerability (*Vulnerabilität*), which not only increases the susceptibility of the individual to the causes of bronchial catarrh, but also renders it more likely that its products will undergo caseous degeneration. The thermometer will afford us much aid in the differential diagnosis between the two diseases, tuberculosis and phthisis: thus, a uniformly high temperature, without evening exacerbations, indicates the former; the occurrence of fluctuations in the markings of the instrument, the latter. The sputa is much more apt to be abundant and to contain shreds of elastic tissue in the latter. Dyspnœa is more evident in the former, and a greater amount of interference with the respiration than can be satisfactorily accounted for by the physical signs is generally an indication that the patient who up to this time may have been only phthisical has become tubercular.

Of course, entertaining views of this character as to the pathology of phthisis, it is not surprising that some of the remedies recommended in its treatment are rather antiphlogistic in their action. Quinia and digitalis are both thought to be indicated, on account of the power which they possess of reducing the temperature of the body. In most respects, however, we do not find that the treatment is different from that in general use in this country.

Before closing this notice, we will call attention to a property which we find ascribed to ipecacuanha,—that of increasing the force of the contractions of the lung; and it is therefore to be prescribed whenever there is reason to believe this is deficient, especially if at the same time there is an accumulation of mucus in the bronchial tubes.

BOOKS AND PAMPHLETS RECEIVED.

From the Surgeon-General's Office: Annual Report of the Surgeon-General U.S.A., 1870. 8vo, pp. 10. Memorandum referring to Reviews and Notices of the Publications of the Surgeon-General's Office. 8vo, pp. 19.

Love of Science Perverted. Vivisection. By W. H. Drummond, D.D., etc. 12mo, pp. 22. Philadelphia, 1870.

Gynæcological Record. By J. E. Pinkham, M.D. 4to. Boston: James Campbell, 1870.

Materia Medica. By John B. Biddle, M.D. Fourth edition. 8vo, pp. 385. Philadelphia: Lindsay & Blakiston, 1870.

Medical and Surgical Reports of Boston City Hospital. First Series. 8vo, pp. 688. Little & Brown, Boston, 1870.

GLEANINGS FROM OUR EXCHANGES.

CONTAMINATION OF DRINKING-WATER.—In the December number of the *Boston Journal of Chemistry* the editor calls attention to the fact that the same danger of lead-poisoning is attendant upon the use of tin-lined lead pipe as upon that of metallic double-lined water-pitchers. He states also that attention was called in that journal for July, 1868, to both these sources of danger.

Another article in the same journal points out that poisoning by salts of zinc can readily occur from the use of water which has been conveyed through the so-called galvanized iron pipe, or which has been collected from roofs covered with zinc or the "galvanized" iron, which, as is well known, is merely iron coated with zinc. This statement is fully supported by articles in foreign journals, the *Polytechnisches Journal*, Von Dingler advising that zinc roofs, or other surfaces exposed to the action of water subsequently to be used for drinking-purposes, should be coated with asphalt varnish, as the zinc will *invariably* and *rapidly* contaminate the water, especially when it is in contact with a metal less easily corroded than itself,—as iron. To this corrosion of the zinc is due the preservation of the iron which it covers. Hence the manufacturers probably need the inducement of their enormous profit—said to be about one thousand per cent.—to enable them with clear consciences to offer their wares as conduits for drinking-water.

PHYSIOLOGY OF THE PANCREATIC SECRETION.—M. Bernstein has published in the *Arbeiten aus der Physiologischen Anstatt zu Leipzig* some conclusions derived from experiments made, under the superintendence of C. Ludwig, upon the pancreatic secretion (*London Lancet*, November 19, p. 722). His views do not accord with those of Claude Bernard. He thinks a perfectly natural and healthy secretion can be obtained from dogs in which a permanent fistula of one of the ducts has been established; for he found the fluid thus obtained capable of converting starch into sugar, of emulsifying fat, and of digesting albumen, or, in other words, of converting it into peptone. The gland was found to be active in direct relation to the ingestion of food, the secretion increasing in quantity immediately after food had been taken, and attaining its maximum about two or three hours after a full meal, and then diminishing to the fifth or seventh hour, then slightly augmenting, and falling to its minimum at the fifteenth hour. Some of these results are similar to those already advanced by other authorities. The most interesting experiments were those instituted by M. Bernstein to investigate the influence of the nervous system on the pancreatic secretion. He found it greatly diminished in its flow when nausea was produced, while actual vomiting almost arrested it, the effect lasting for a considerable period. He also discovered, by irritating the pneumo-gastric, mechanically or otherwise, that any centripetal irritation of that nerve arrests the secretion,—that is to say, exerts an inhibitory influence on the activity of the gland.

DISCOVERY OF THE "PILTZ" OR FUNGUS OF HOOPING-COUGH (LETZERICH. *Virchow's Archives*, March).—If the sputa of children in the catarrhal stage of hooping-cough is examined, small roundish or elliptical reddish-brown spores are found, which subsequently rapidly develop filaments. In the second stage of pertussis these filaments are found matted together, bearing at their extremities small round spores. These germs, unlike those which are found in diphtheria, do not penetrate the epithelial cells of the mucous membrane, but the mucous corpuscles are often filled with them. Letzerich cultivated these fungi on pieces of bread soaked in milk, and introduced them into the air-passages of young rabbits, after having performed tracheotomy. In from four to six days catarrhal symptoms were present, which lasted from eight to ten days. If the animal was killed at this time, the epiglottis, the folds of the mucous membrane in the larynx, and the trachea were covered with the germinating fungi: viz., the spider-web-like filaments, bearing on their extremities groups of small, colorless, glistening spores, matted together in the increased mucous secretion of the part, but not penetrating into the mucous membrane. In the second week the animal con-

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stantly attempted to vomit, and finally the characteristic attacks of pertussis followed, with the forcible expulsion of tenacious mucus, which, microscopically examined, contained the germs already described. The animals generally showed symptoms of pneumonia, and on post-mortem examination it was found that in some cases the fungi had extended even into the alveoli of the lungs. Letzerich thinks that when the development of the germs is confined to the larynx of the child, the disease runs its regular course, while if the process extends to the alveoli, the dreaded pulmonary complications ensue.

MISCELLANY.

DRUNKENNESS IN NEW YORK.—Under this title we find in the number of the *Journal de Médecine Mentale* for November, 1869, the following passage:

"The *Journal de Médecine de Bordeaux* (October) obtains from an American newspaper the following statement: 'The asylum at Binghamton, opened five years ago, for wealthy inebriates, has received during that period 39 Protestant ministers, 8 magistrates, 40 merchants, 226 physicians, 540 gentlemen, and 1387 young women.'"

What American newspaper is responsible for this marvellous statement we are not told. Here, it is too ridiculous for belief; but abroad, where as little is known of our morals as of our geography, it will be received like gospel truth. Yet every statement in it, saving that of there being such an institution, is false. We have not their reports at hand, but we happen to know that two years ago not one woman was, or ever had been, an inmate of that institution; and we are quite sure that all the numbers are magnified at least tenfold.

Some malignant star seems to have presided over the fortunes of this institution. Though designed to meet a pressing want of society, guided by the counsels and supported by the abundant bounties of a host of benevolent men, and ided by a munificent revenue from the State, it has failed,—to all appearance, ignominiously failed. Twice it has been ravaged by fire, twice its head has been removed,—in one, if not in both cases, for gross incompetence,—and, though with a capacity for receiving hundreds of subjects, it was in operation several years before the whole number of admissions had reached one hundred.

The case excites grave reflections, and no one can be so indifferent to the matter as not to desire to know the causes of such a singular failure. The casual visitor who passes through its rooms and halls, its grounds and out-buildings, must have guessed pretty correctly at some of them; while those who endeavor, in a sober and thoughtful spirit, to understand the relations which such an institution should hold to habitual inebriety on the one hand, and to the principles and passions of human nature and the laws of the land on the other, must entertain something more than a suspicion respecting the rest. There is this useful lesson, however, to be derived from it: that, if such institutions are to succeed among us, their friends must avoid the mistakes committed in the experiment so fairly tried at Binghamton.

AN EXPLANATION.—Some one inserted a quack advertisement in each copy of the last annual circular of the Long Island College Hospital. The authorities of that highly respectable institution, learning that such was the case, have issued a card, perhaps unnecessarily, explaining that the trick was done without their knowledge. It would be well for other colleges to be on their guard against similar freaks of quackery. Is there any existing law which would touch the pocket of the perpetrator?

ELECTION OF VISITING PHYSICIAN TO THE PHILADELPHIA HOSPITAL.—We regret to learn that Dr. Edward Rhoads has been compelled, owing to ill health, to resign his position on the medical staff of the Philadelphia Hospital. An election to fill the vacancy was held on Monday, December 19, resulting in the choice of Dr. H. C. Wood, Jr., well known to the medical world by his numerous valuable contributions to medical literature.

PHYSICIANS AND DRUGGISTS.—An excellent article on the relations existing between physicians and apothecaries, by Dr. Burge, of Brooklyn, appeared in the *New York Medical Journal* for October, 1870. We should be glad to see this subject thoroughly ventilated, as well in the interests of the public as of the medical profession. It is a matter of ethics, and in all large cities, in our opinion, the neglect of it has been, is, and will be the source of grave abuses.

CONSULTING PHYSICIANS' FEES.—A Western cotemporary raises the question, "On whom rests the responsibility of paying the consulting physician?"—citing the case of an Irish surgeon who claimed that the physician who called him in was liable. It seems only common sense that the party for whose benefit the consultation is held—the patient—should bear the expense. But should the patient have objected to the consultation beforehand, or consented to it on the supposition that his ordinary attendant desired it merely for his own satisfaction, he might reasonably demur to being charged for it.

A case recently occurred in New York, in which Dr. Gurdon Buck brought suit against the well-known hatter, Mr. Amidon, for services rendered at the request of Mr. A. to his (Mr. A.'s) brother; the technical point raised being that Mr. A. merely acted as a messenger, upon a telegram sent by the attending physician of the patient from Groton, Connecticut. But the doctor said he looked out Mr. A.'s name in the New York City Directory, and, finding reason to believe him a responsible person, obeyed his summons. We are not informed of the issue of the case.

CORRECTION.—We cheerfully make the following extract from the *Boston Medical and Surgical Journal* of December 1:

"MEDICAL BENEVOLENCE.—Our cotemporary, the *Medical Times*, is in error in stating that the 'New York Physicians' Aid Association' is the only one in this country having for its object the distribution of charity to needy members of the profession and their families. The Massachusetts Medical Benevolent Society was formed in 1857, and has been in successful operation ever since. It now numbers about one hundred and forty members. Any Fellow of the Massachusetts Medical Society in good standing may become a member on receiving the approval of the Council."

MR. T. HOLMES.—We much regret to see it stated that this London surgeon, so widely and well known as the editor of the "System of Surgery" and author of the volume on "The Surgical Treatment of the Diseases of Children," has lost the sight of one eye by an attack of ophthalmia.

SMALLPOX IN BROOKLYN.—The correspondent of a daily paper says, under date of December 8, that there are eighty-six patients in the regular Smallpox Hospital in Brooklyn, besides eighteen beds, "which are all overcrowded," in the dead-house.

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It would seem that the mortuary statistics of some of the German hospitals can almost be made out beforehand, so accommodating are the patients. The veracious correspondent of the New York *Herald* says:

"When a German soldier falls ill, it seems he is expected to die as soon as possible and take himself out of the way. In some hospitals all the patients die every night, and the beds are emptied of the dead and immediately filled with new sick."

Examination by Experts.—In a recent trial in New York, Dr. Sayre being accused of malpractice, an application was made by his counsel for an examination, by experts, of the actual condition of the plaintiff. After much opposition, the demand was acceded to; the result was that the charge could not be sustained, and the plaintiff was nonsuited. This most desirable precedent, if followed, will be of great benefit to the cause of justice, since it shields the profession on the one hand from vexatious and groundless prosecutions, and on the other from the imputation of shirking a fair inquiry into the actual merits of the cases in which they are attacked.

Negative Evidence as to the Value of Vaccination.—The *Detroit Review of Medicine and Pharmacy* says, "In Russia vaccination is not compulsory. According to official returns, 10,350,000 persons have died of smallpox in that country during the last seventy years. What say our friends of the Anti-Vaccination League to this?"

Divorces in America.—We find the following in the *Northwestern Medical and Surgical Journal:*

"Dr. Charles Drysdale, an English physician of eminence, who is a strong advocate of the limitation of offspring and facility of divorce, says, in a letter to the *Medical Press and Circular*, 'I hear from Mr. Conway, a distinguished American literary man in London, that since the establishment of the facility of divorce in Indiana, United States, there has been hardly any prostitution in that State, and that comparatively few persons avail themselves of the six months' notice for incompatibility granted by the laws.'

"Whence Mr. Conway derived the above remarkable statistical information we cannot guess; but anything more at variance with the commonly-received impression on this side of the Atlantic, it would be difficult to conceive. The actual extent of prostitution in the towns of Indiana we have no means of ascertaining accurately; though, from what we can learn, it would seem to be certainly no less than in other communities; while in the matter of applications for divorce, either the law reporters of the local press or Dr. Drysdale's informant must be sadly in error. Perhaps, however, Mr. Conway spoke in a vein of unappreciated irony, or, noting his listener's unsophistication, yielded to the American proclivity for hoaxing. Under any circumstances, we would advise Dr. Drysdale not to rest his sociological theory on such a foundation without further investigation of statistical facts."

The credulity of foreigners, and especially of the British, in regard to things in this country, is truly surprising. In the instance just quoted, much harm might be done by the assumption of the truth of a vague and unauthentic statement, and the use of it in support of a most dangerous social policy.

A much more amusing specimen of credulity is given by Dr. Mapother, who, in an address on American medicine, related an anecdote of a practitioner who compelled another to consult with him by producing a pair of revolvers (which he cheerfully called his "diplomas") and making an instant duel the alternative. A man so decided in his plans of action would scarcely feel the need of consultation with any one.

Mortality of Philadelphia.—The following statements are condensed from the Health Office Reports:

	For the week ending Dec. 10.	Dec. 17.
Diseases of the Brain and Nervous System	41	29
Diseases of the Organs of Circulation and Respiration	100	112
Diseases of the Abdominal Organs	13	16
Zymotic Diseases	19	23
Constitutional Diseases	6	17
Casualties	8	3
Stillborn	13	23
Unclassified	42	43
Adults	129	130
Minors	112	136
Totals	241	266

ARMY NEWS.

We have received from the Surgeon-General's Office the following highly important order relative to the construction of army hospitals:

WAR DEPARTMENT,
Adjutant-General's Office,
Washington, D.C., November 23, 1870.

General Orders, No. 118.

The following regulations relative to hospitals for the army are published for the information of all concerned:

1. Regulation Hospitals will be of the plans this day approved, and will, when specially authorized by the Secretary of War, be erected at permanent posts. In the construction of a new post, the erection of the hospital shall go on *pari passu*, when practicable, with that of the storehouses and men's quarters.

2. Provisionary Hospitals are such as are erected at temporary posts. In future no such building shall be erected or occupied for hospital purposes until the opinion of a medical officer has been obtained in writing as to the merits of the site and arrangements; and if the Commanding Officer differ from this opinion he shall return the same to the medical officer, with his reasons for so doing endorsed thereon.

3. Requests for the erection of Regulation Hospitals will be made by the medical officer through the Commanding Officer. The location of the building, the proposed material, the exact modifications of the regular plan, if any, which are proposed, and the estimated cost, are to be stated in the request. The Commanding Officer will endorse his opinion upon the request and forward it to Department Headquarters. The Department Commander will obtain the views of the Medical Director and Department Quartermaster, and forward the papers to the War Department, with his own opinion endorsed thereon.

4. When the erection of an hospital has been authorized, the officer charged with its construction will consult, as to minor details, with the medical officer of the post, who will act as inspector of the work on the part of the Medical Department.

5. When the building is reported ready for occupation, the medical officer will report in full as to its merits to the Surgeon-General, through the Medical Director, and shall furnish a copy of the same to the constructing officer.

6. Copies of all plans, estimates, and orders connected with the erection or repairs of post hospitals, whether temporary or permanent, will be furnished to the Medical Department by the officer making the same, and when furnished to a post surgeon or a medical director, they will at once forward them, with their comments, to the Surgeon-General.

7. The Surgeon-General will in future furnish to the Quartermaster-General, in time for his annual estimates, a statement of the number and size of hospitals, and of the amount of hospital repairs, which will probably be required for the ensuing year, with the estimated cost of the same.

8. The plans and specifications for post hospitals approved this day will form the basis of action until further orders in regard to this subject.

By order of the Secretary of War.
E. D. Townsend, *Adjutant-General.*

CIRCULAR No. 3.*

WAR DEPARTMENT,
Surgeon-General's Office,
Washington, D.C., November 23, 1870.

The following are the approved plans and specifications referred to in the last clause of the above order:

Approved Plan for a Regulation Post Hospital of 24 Beds. (See Fig. A.)

This hospital consists of a central administration building and two wards arranged as wings.

The wing for each ward will be 45 feet long, 24 feet wide, and 15 feet high in the clear from floor to ceiling. For very cold climates, the height may be reduced to 12 feet, in which case the length will be increased to 50 feet.

* The numerous references in the text are to plates accompanying the original circular, which we are unable to reproduce. The cuts here presented display the front elevation of the hospitals described.

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Attached to each ward, at the outer end and behind, will be a room for the earth-closet, 9 feet square.

The administration building will be 35 feet front by 39 feet deep, and two

FIG. A.

stories high, with a back-building 40 by 14 feet. Each story of this building will be 12 feet high from floor to ceiling.

A veranda, 10 feet wide, will surround the hospital, with the exception of the kitchen.

In hot climates the wards will be detached from the main building, only remaining connected with it by the veranda, which will thus entirely surround the ward. The back-building will be separated in like manner.

The plan of the first floor, the designations and dimensions of rooms, and the position of doors, chimneys, windows, and beds, are shown in Fig. 1, Plate I.

The plan and dimensions of the second floor are shown in Fig. 2, Plate No. I. The front and side elevations of the building are shown in Figs. 1 and 2, Plate II.

APPROVED PLAN FOR A REGULATION POST HOSPITAL OF 12 BEDS.
(See Fig. B.)

Designed especially for malarious regions and southern climates where it is desirable that the ward shall be on the second story.

This hospital will consist of a building two stories high, with a veranda extending entirely around the building, 10 feet wide.

FIG. B.

The arrangement, designation, and dimensions of rooms, and the position of chimneys, doors, windows, and beds, are shown in Figs. 1 and 2, Plate III. The front elevation is shown in Fig. 3, Plate III.

A modification of the plan of a building of this class, which may be adopted when deemed desirable, is shown in Figs. 1 and 2, Plate IV. This form will have verandas similar to those shown in Plate III.

It is supposed that Regulation Hospitals will usually be built of wood; but brick or stone may be used when deemed more economical.

In all cases the ground floor must be raised 18 inches from the ground, with arrangements for free ventilation underneath it in warm weather. In warm climates and malarious regions the ground floor will be raised at least 3 feet above the ground, on piers or open arches.

When built of wood, these hospitals should be balloon frames, covered first with rough boarding, then with tarred paper, and clapboarded over the whole.

The walls and ceilings of all rooms are to be lathed and plastered.

The floors are to be of the best quality of clear plank, 3 inches wide, of hard pine or other hard wood, tongued and grooved, and neatly fitted.

The roofs to be fitted with gutters and eavespouts leading to a good cistern, to be constructed in connection with the hospital.

In northern climates, when the ground will permit of it, a good cellar will be constructed under the kitchen.

The windows of the wards will be 10 by 3 feet, and reach within one foot of the ceiling. Both sashes will be made to slide with weights and pulleys and be neatly fitted. (To the top of the upper sash, for its whole width, will be attached a light louver board, one foot wide, to throw the entering air towards the ceiling.)

At posts where the mean temperature for the winter is liable to fall below 28° F., the ceiling of the ward being 12 feet from the floor, the windows will be double, and 8 feet high by 3 wide.

The windows of the administration building will be 7 by 3 feet, and be fitted with outside shutters.

The dispensary is to be neatly fitted with shelving, drawers, and counters; the store-rooms with shelving, which, for bedding and clothing, will be open racks with slat bottoms.

The dimensions given each room in the plans must be attained in the clear.

The arrangements for ventilation of the wards will vary according to climate.

On the Gulf coast and in Arizona the wards will not be ceiled, and will have ridge ventilation their whole length.

At all posts where continuous artificial heat is required for three months in the year, the walls will be ceiled and have boxed openings carried from the centre of the ceiling to the ridge for summer ventilation. There will be two of these openings, each 10 feet long by 2½ feet wide, and 10 feet apart.

In winter the heating will be effected by a ventilating double fireplace, the form of which is shown in Figs. 1, 2, and 3, Plate V.

It consists essentially of two open fireplaces, placed back to back in the centre of the ward and enclosing an air-chamber between them. This air chamber communicates below with an air-box, 18 inches square, which passes underneath the floor of the ward from side to side, and opens above into the wards by two pipes controlled by registers.

The pipe from this ventilating fireplace, 8 inches in diameter, passes up through a close-fitting earthen tube or collar in the ceiling. One foot above the ceiling it enters a shaft or jacket, about 24 inches in diameter, which pierces the roof, and, extending four feet above it, is covered with a sheet-iron cap, which in its turn is pierced by the stove-pipe, which will be capped in like manner. This shaft through which the stove-pipe passes should be of clay or earthenware; but if a wooden shaft is used, a sheet-iron tube, 18 inches in diameter, should intervene between the stove-pipe and the wooden tube. At each end of the ward, and two feet from the centre, will be an opening in the ceiling, one foot square, from which an air-box will pass to a box enclosing the lower mouth of the tube surrrounding the stove-pipe. The heat of the pipe above the ceiling will thus create a continuous upward current in the surrounding tube, which will be supplied by the vitiated air from the ward through the air-boxes.

The arrangements above described are shown in Figs. 4 and 5, Plate V.

The Surgeon-General will indicate such modifications of this plan of ventilation as may seem desirable on account of locality, etc., when the plans for each hospital are submitted to him.

A ventilating shaft, 6 inches square, will be placed in each earth-closet room, and the lamp or gas-burner of this room should be directly beneath this shaft. The chimney of the kitchen will be built with two flues, one of which will open near the ceiling, and be used exclusively for ventilation.

In hospitals built of brick, the walls will be double, a space of three inches being left between the inner and outer walls, the two walls being securely tied together with bricks, so arranged as to admit of a free circulation of air between them.

Other sizes of hospitals may be constructed, when approved by the War Department, by suitable lengthening of one or both wards.

Fig. 3, Plate IV., gives a ground plan for a Provisionary Post Hospital of 12 beds, to be constructed of logs, adobe, or lumber, as the case may be or as the circumstances may permit. This plan is given simply as a guide to be followed in cases which do not admit of delay, and for use of temporary encampments.

At all permanent posts established in future, a proper hospital will be constructed upon the plans given above for Regulation Post Hospitals.

J. K. BARNES, *Surgeon-General U. S. Army.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 4, 1870, TO DECEMBER 17, 1870, INCLUSIVE.

COOPER, G. E., SURGEON.—By G. O. 28, C.S., Headquarters Department of the Columbia, announced as Medical Director of that Department.

MAGRUDER, D. L., SURGEON.—By S. O. 224, C.S., Headquarters Department of the Missouri, granted leave of absence for *thirty days*, with permission to apply for an extension of *sixty days*.

GHISELIN, J. T., SURGEON.—By G. O. 28, C.S., Headquarters Department of the Columbia, relieved from duty as Acting Medical Director of that Department.

CLEMENTS, B. A., SURGEON.—Returned to the post at Jackson Barracks, New Orleans, La., Dec. 6, 1870.

TILTON, H. R., ASSISTANT-SURGEON.—By S. O. 224, C.S., Headquarters Department of the East, granted leave of absence for *thirty days*, with permission to apply for an extension of *sixty days*.

MCMILLIN, THOMAS, ASSISTANT-SURGEON.—By S. O. 181, C.S., Headquarters Military Division of the Pacific, granted leave of absence for *sixty days*, with permission to apply for an extension of *four months*.

KOERPER, E. A., ASSISTANT-SURGEON.—By S. O. 151, C.S., Headquarters Department of Texas, the leave of absence granted him in S. O. 129, C.S., Headquarters Fort Clark, Texas, is extended *fifteen days*.

O'REILLY, R. M., ASSISTANT-SURGEON.—By S. O. 177, C.S., Headquarters Department of California, confirms telegram authorizing him to delay *fourteen days* in reporting at Headquarters Department of California.

O'REILLY, R. M., ASSISTANT-SURGEON.—S. O. 171, C. S., Headquarters Military Division of the Pacific, the permission to delay *fourteen days* reporting at Headquarters Department of California is extended *forty days*.

DICKSON, J. M., ASSISTANT-SURGEON.—By S. O., dated Headquarters Department of the Platte, Nov. 15, 1870, granted leave of absence.

MINOR, W. C., ASSISTANT-SUUGEON.—By G. O. 119, War Department, Adjutant-General's Office, Nov. 25, 1870, retired from active service.

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THE MEDICAL TIMES.

MONDAY, JANUARY 16, 1871.

ORIGINAL LECTURES.

A CLINICAL LECTURE

ON A CASE OF ŒDEMA OF ONE LOWER LIMB FOLLOWING TYPHOID FEVER, AND ON THE DIVERS VARIETIES OF EXTERNAL SWELLINGS OCCURRING AFTER LOW FEVERS.

Delivered at the Pennsylvania Hospital, December 17, 1870.

BY J. M. DA COSTA, M.D.,

One of the Physicians to the Hospital.

GENTLEMEN:—The case that I bring before you this morning belongs to the rarer yet very important sequelæ of low fevers, and I shall take this opportunity of calling your attention, while explaining the morbid phenomena before us, to the whole subject of œdematous, or apparently œdematous, swellings happening after fevers.

But let me first read you the history of the case, as it has been drawn up by my clinical assistant, Dr. Herbert Norris, and let us re-examine, as we proceed, some of the points mentioned.

Joseph McI——, occupying Bed 31 of the men's medical ward, was admitted November 3, 1870. He is 27 years of age, single, and moderately temperate; has always been a very healthy man; never had any form of rheumatism. Ten weeks prior to his coming into the Hospital, and while at Paterson, New Jersey, he was taken down with typhoid fever, which was of so grave a type as to confine him to his bed for eight weeks. On recovering his consciousness, in the third week of the fever, he noticed that his right lower extremity was swollen to twice its normal size and pitted deeply on pressure. The swelling was uniform from hip to toes, but was unattended with pain or tenderness. There was, however, some stiffness of the tendons at the back of the knee, which made extension of the leg difficult and painful. Flexion of the knee was painless, all other joints moved freely, and there were no signs of local inflammation. The skin of the whole limb was pale and shiny, and nowhere was the least redness noticed. There was numbness of the entire extremity, but no marked loss of sensibility. About two weeks before he applied to the Hospital, he himself observed that the right inguinal glands were enlarged and somewhat painful, but after a few days they gradually diminished. No swelling of the left limb existed; but since he first noticed the affection of the other, he has been aware of impaired sensibility of the skin on the front of the left thigh, extending from the hip to the knee.

On admission, the man appeared to be in good health, but thin. The tongue was clean; the appetite fair; the bowels were rather constipated. There was swelling of the right leg and thigh, with some enlargement of lymphatic glands in the groin. Stiffness of tendons behind the knee still interfered with perfect extension of the leg. Some tenderness on pressure in the popliteal space existed, but no pain on pressure and no signs of enlargement along the course of the veins at any part of the leg. Indeed, the patient had no pain, except to the right of the sacrum. The heart-sounds were healthy; so were the lungs. The urine was pale, straw-colored, acid; contained no albumen; had a slight cloudy deposit, in which were found many oxalate-of-lime crystals.

For the first two weeks after admission there was more swelling of the right thigh; the leg was somewhat œdematous; pain to the right of the sacrum continued. The lower part of the left leg pitted on deep pressure. The spot of insensibility on the left side was more closely investigated, and it was found that while on the front of the right thigh, with the æsthesiometer transversely placed, the two points were somewhat confused at 1⅞ inches, but the sharp points were felt as such, on the front of the left thigh at the same spot there was no pain from the pricking of the points on considerable pressure and penetration,—only a feeling of weight; yet the two points began to be confused only at the same distance as on the other side. No loss of sensibility existed below the knees, on either side, to pain or contact, though there was a feeling of numbness on the right side.

Electro-muscular (faradaic) *sensibility* was perfect in the left lower extremity, except in the oval space over the quadratus femoris muscle, where a current sufficient to produce marked muscular contraction was scarcely felt, although the dampness and weight of the electrodes were distinctly perceived; with a dry electrode there was no feeling on the skin, or the current was even less discernible than when sent into the muscle with the wet sponge.

Electro-muscular-contractility on this side was wholly unimpaired.

On the right side the electric sensibility was greatly diminished from the hip down, especially below the knee,—ordinary sensibility to pain, cold, and weight remaining unimpaired. When, however, one pole was placed at the outlet of the sciatic nerve, and the other in the course of that nerve in the popliteal space, or down the leg, most painful sensation was produced along the nerve-trunk.

Electric contractility in all the muscles of the right side was somewhat, but not greatly, diminished. There was no pain on pressure upon the region over the sciatic.

Under the use of stimulating frictions, of rest, of good nourishment, and of a solution of peracetate of iron, exchanged after a time for the iodide of iron, of the local application of the compound iodine ointment over the swollen glands, and of faradization with a metallic electrode over the spot of insensibility, the patient improved greatly. When he was exhibited to the class the improvement had fairly commenced. We have since ascertained that he has gained twenty-five pounds; he looks well, and walks about, though some of the swelling still persists and is aggravated by exercise, and the enlargement of the glands can still be discerned. The temperature in the left axilla is only 97°. When he was before the class (December 17) the electrical phenomena were re-tested, and with the same result. The faradization on the left side has now produced a most beneficial change in the sensibility of the anæsthetic part.

We have, then, before us a case of one-sided swelling, œdematous in character, without pain or tenderness, and without disease of the heart or kidneys. An affection of these viscera, should it even have been present, would most likely have given rise to a double-sided swelling; but, under any circumstances, neither to these causes nor to an affection of the blood can the unilateral tumefaction here be assigned. We are bound to look for a more local source to interpret the limited disorder; and at first sight the most probable cause is the one which is assumed to explain all or most cases of the kind following fevers,—phlegmasia dolens, or milk-leg,—and which again is thought to be dependent upon phlebitis with coagulum in the iliac or femoral vein.

But what is the evidence here? Is it in favor of such a view? I think not. There is no fever, as is so common in this affection; nor a heightened temperature, nor tenderness, nor pain; nor do we find signs of disordered venous circulation. We must thus either admit that phlegmasia dolens can occur without its most characteristic symptoms, and not consent to associate it—as is most usually, I will not say invariably, done—with alteration of veins, or refuse to group this case with it. Indeed, observation has taught me that these swellings after fevers may be of diverse origin, and that to attribute them all to one cause is incorrect.

Undoubtedly there are cases in which inflammation and obstruction of the veins happen; but, after investigating the subject of these swellings following low fevers, I am sure that the occurrence of true phlegmasia dolens, particularly if we link this disease to phlebitis or venous obstruction, is the cause most seldom present. Pain of any kind, in truth, if we except that from stiffness and inaction of the limb, was, in the cases I have met with, a rare symptom.

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The old idea concerning these swellings following fevers was that they were due to inflammation of the subcutaneous cellular tissue; and I believe this view to be correct for some cases. Yet I do not think it is of very general applicability; for, if such were a common cause, would not abscesses much oftener result from the affection? Abscesses do, however, sometimes happen. I could narrate to you an instance; and several have been placed on record by M. Dauvé (*L'Union Médicale*, 1866). In one of his cases an enormous enlargement of the upper and inner half of the right thigh was observed on the twenty-fifth day of the typhoid disease; and deep fluctuation could be felt. An incision gave vent to about a quart of blackish-brown fluid. The patient died, and in the thigh was a cavity as large as the fist, formed chiefly by the aponeurosis of the vastus internus, which in part was reduced to the condition of a blackish pulp. In this instance, then, the muscular structure shared in—perhaps was the chief seat of—the affection.

But none of the causes so far mentioned can be evoked to explain the case before us. Looking at the coexisting glandular enlargement and the spot of cutaneous anæsthesia on the left leg, the most probable view seems to be to connect the deep and painless œdema here existing with pressure from the enlarged glands. That the lymphatic glands are at times involved in typhoid fever we know from the concurrent testimony of morbid anatomists: to quote a high authority on these subjects, Murchison, "the glands in the fissure of the liver, the gastric, œsophageal, lumbar, or inguinal glands, are occasionally found enlarged." Now, when we reflect that we have here still the evidence of tumefaction of the inguinal glands, it is but fair to presume that the lumbar lymphatic glands, too, are implicated; and, considering that they lie upon and adjacent to the common iliac veins, that the chain of glands stretches across the spine, and that some of them surround the external cutaneous nerve which, derived from the second and third lumbar nerves, supplies the skin in front of the thigh as far down as the knee, and is therefore evidently the chief nerve implicated in giving rise to the insensibility on the left side, we have every reason for assuming the glandular disorder to have been the main originating source of the trouble.

But, before adopting this view, it is necessary that I should explain to you some points of the case which do not seem to belong to it, and which render a spinal origin of the anomalous symptoms apparently more likely. In truth, the difficulty in moving the limb which at first existed, the pain to the right of the sacrum which was near the lumbar plexus and passed down to the beginning of the course of the sciatic, the deficient electro-muscular contractility, and the cutaneous anæsthesia, might, in the light of our present knowledge of the partial palsies which succeed enteric fever, give color to this view of matters. But the disorder on motion was from weight and swelling, not from impaired nervous force; the painful contraction of the limb was the result of keeping it long in one position, and, besides, a feeling of tension and pain at the insertion of the hamstring muscles is very common in marked cases of œdema of the leg; the pain and cutaneous anæsthesia may be better—certainly quite as well—explained by the cause assigned; and with reference to the deficient electro-muscular contractility, I will put you in possession of some facts which may materially influence your opinion of the value of this sign. I have made a number of observations on the matter, and have found that where there are deep-seated œdema and swelling of tissue, the faradaic current does not so readily produce muscular contractions, though there be not the slightest proof of any central nervous lesion. Thus, in referring to my notes of a case in this hospital in March, 1866, of marked phlegmasia dolens following delivery, it is stated that on the greatly swollen thigh there was no contraction apparent when faradizing over the rectus or sartorius muscle; the electro-muscular sensibility, too, was diminished: the same result was obtained over the body and tendon of the triceps. And, following up this observation, which I repeated in other cases, on limbs greatly distended from cardiac dropsy, I perceived the same. Thus you see that there are circumstances which prevent the sign of defective electro-muscular contractility, so valuable otherwise in the recognition of many spinal lesions, from having its usual significance.

But to return to the case before us. Whether you adopt the explanation of it or not, you will at least have become convinced of the dissimilarity of the causes of the affection, and how incorrect it is to attribute all these swellings to phlebitis or changes in the blood within the veins. Fortunately, the complication of fever under discussion, no matter what its origin, almost always ends in recovery. Its treatment consists in strict rest in the recumbent position, in fomenting the limbs, and in the subsequent use of stimulating frictions, and of bandages. If there be pain and tenderness in the situation of the femoral vein, a few leeches or a blister may be employed; and in such cases frictions had better be omitted. Indeed, looking, as I trust you will now, at the cases with reference to their probable origin, you will learn to modify your therapeutics according to the varying circumstances; and whether to recommend or to abstain from frictions, whether to use diuretics freely or not,—and usually they are serviceable,—whether to employ iodine locally and internally, will much depend on the kind of case before you. Speaking generally, I would say that you must always endeavor to improve the composition of the blood or prevent its deterioration; hence iron is so often of value; and you may frequently with advantage make use of a remedy which I have tried repeatedly,—local sweating; but you will presently learn more about this from a case I shall refer to at some length.

The local disorder is not always in the lower extremity. It may be found in the upper; and Virchow reports an instance in which the œdema was limited to one side of the face and was found to be associated with obliteration of the internal jugular. On the other hand, there may be marked œdema of both extremities after fever, and this may be due simply to the altered blood, with perhaps a more decided granular change of the muscles of the heart weakening the organ; or it may be owing to the same causes that I have already explained, acting more generally. Even the phlegmasia dolens proper may be double-sided, as you will learn from this case. I must ask your indulgence in detailing it so fully: the opportunity it afforded for watching the disease from the beginning; the temperature-observations we were able to make,—and in doing so the most intelligent care was exercised by the resident physician, Dr. E. Richardson;—the fact that a rise in temperature preceded the early manifestations of the local phenomena; and the invasion of one leg after the other, warrant me in reporting it at what would otherwise be tedious length. Then it will illustrate a form of the malady in which there was every reason to believe that the veins were implicated; and it will teach you some details of treatment to which I have thus far only briefly referred.

Catharine B——, 27 years of age, a domestic, was taken sick about December 1, 1868, and at the time of admission into the Hospital (December 14) had well-marked typhoid fever, from which she rapidly recovered, after having copious eruption, diarrhœa, and unusually prominent and large sudamina.

The diarrhœa was checked shortly after admission, and eruption and sudamina had disappeared by the 30th, when

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she showed a temperature of 98⅗°; was comfortable, in good spirits, free from all pain, and was apparently getting well. On January 1 she had severe pain in the back, extending to both limbs, with much distress, and there was an accompanying considerable rise in the temperature. The pain was relieved in twenty-four hours by sinapisms to the back and an opium suppository. On the morning of January 3 she complained of pain in the left leg, which was found to be white, much swollen, and very painful to the touch, particularly in the calf, and in the course of the femoral vessels from Poupart's ligament downwards. Temperature, taken at 1 P.M., 100⅘°; pulse, 77; resp., 27. She was ordered a blister 2 × 6 in. over upper part of femorals, to have the leg elevated on pillows, and ¼ grain of sulph. of morphia should the pain be severe. The previous treatment of sulph. of quinia, two grains every three hours during the daytime, and whiskey, which had been reduced from 10 oz. to 2 oz., was continued. 7 P.M.—Leg more swollen, but not tense; is white and very sensitive to touch. There is tenderness over femoral vein, but no very obvious enlargement of veins of the leg. A quarter of a grain of sulph. of morphia, given one or two hours ago, has relieved the pain. Limb was wrapped in cotton. Pulse, 88; resp., 21; temp., 100½°.

January 4, 10 A.M.—Very little pain when quiet; limb rather more swollen, and very sensitive. The temperature has fallen slowly since œdema in the limb has been progressing. Pulse, 81; resp., 24; temp., 99¼°. She was ordered to have the affected limb sweated by slacking lime in a saucer near it. 7 P.M.—Pulse, 81; resp., 27; temp., 100⅕°. 8 P.M.—Has just had the sweating, under which there is free perspiration from the limb. Urine examined this evening. Red, sp. gr. 1020, alkaline, with a heavy deposit consisting of large quantities of amorphous urates and triple phosphates; no casts or albumen.

January 5, 10 A.M.—Feels quite comfortable; has had a good night, but is pale and sallow; tongue moist and free from coating, except a light fur on the back part; appetite fair. Pulse, 72; resp., 24; temp., 98½°. Potas. acetat. gr. xx, three times daily. 8 P.M.—No marked change; swelling not diminished. The limb was again sweated and wrapped in cotton. Pulse, 84; resp., 27; temp., 100 4/10°.

January 6, 9 A.M.—Still comfortable; has passed a good night; tongue moist; no signs of thoracic trouble; leg about in the same condition as yesterday; no pain or swelling in the right leg. ℞. Tr. ferri chlor. gtt. xx, three times daily. Sweating repeated, and other treatment, excepting acetate of potassa, continued. Pulse, 75; resp., 24; temp., 99 3/10°. 8 P.M.—Taken before class to-day without much inconvenience. Had an increase of pain this morning; relieved by a quarter of a grain of sulphate of morphia. Skin in good condition; no sweating observed, save at the time of the sweating of the leg; leg still very sensitive to touch, but swelling not increased. Pulse, 78; resp., 27; temp., 102⅕°.

January 7, 10 A.M.—No material change; sweating again applied, and the leg then tightly wrapped in cotton. Pulse, of rather small volume, 78; resp., 24; temp., 99⅗°. 8 P.M.—Has had no anodyne to-day, but experiences little or no pain; leg rather diminished in size. Pulse, 75; resp., 27; temp., 102°.

January 8, 9 A.M.—Is free from pain, and has slept well; limb still swollen, but rather less so than yesterday. Pulse, 81; resp., 24; temp., 99 3/10°. 8 P.M.—Pulse, 78; resp., 27; temp., 101°.

January 9, 9 A.M.—Pulse, 70; resp., 27; temp., 97½°. 7 P.M.—Seems to be somewhat distressed this evening, but has no local pain; leg about the same in size and tenderness as at last note; the sweating of the limb omitted to-day and until further order; other treatment continued. Pulse, 75; resp., 27; temp., 101°.

January 10, 10 A.M.—Leg growing less sensitive to pressure, and sensitiveness over femoral vein almost absent. Pulse, 90; resp., 30; temp., 102°. 8 P.M.—Dry râles over posterior portions of chest both sides. Turpentine stupes ordered. Pulse, 87; resp., 30; temp., 99⅗°.

January 11, 10 A.M.—In much the same condition as yesterday; appetite poor; patient feels uncomfortable, but experiences no pain in left leg except on very firm pressure; limb still wrapped in cotton, with bandages drawn firmly. Pulse, 77; resp., 30; temp. 98⅘°. 8 P.M.—About the same; looks paler than before the supervention of the phlegmasia alba; skin moderately moist; no tendency to dryness of tongue has appeared since December 30. Pulse, 72; resp., 28; temp., 99½°.

January 12, 9 A.M.—Leg reduced in size, but is still larger than the other; wrapping of the leg ordered to be stopped; turpentine stupes to chest and other treatment continued, except the quinine to be diminished one-half. Pulse, 69; resp., 21; temp., 97⅗°. 8 P.M.—Pulse, 69; resp., 24; temp., 98⅗°.

January 13, 9 A.M.—No pain in the leg, except in popliteal space on pressure. Pulse, 62; resp., 27; temp., 97⅜°. 7 P.M.—Has been up before the class to-day, and has not experienced any ill effects. Leg again wrapped in cotton and bandaged. Pulse, 60; resp., 22; temp., 98⅖°.

January 14, 9 A.M.—The patient better in every respect; has had a good night. Pulse, 84; resp., 24; temp., 97⅝°. 8 P.M.—Feels comfortable; unable to produce pain by pressure in any part of limb, the tenderness in popliteal space having totally disappeared; swelling not noticeable; some dry râles heard over posterior and lower part of right lung, and rather harsh breathing in left lung posteriorly; leg has been wrapped up in cotton all day. Pulse 78, and stronger; resp., 18; temp., 98½°.

January 15, 9 A.M.—Complexion and color of lips much better. 8 P.M.—Râles have disappeared. Pulse, 69; resp., 21; temp., 99 3/10°.

January 16, 9 A.M.—Steady improvement. Pulse, 66; resp., 24; temp., 99¼°. 8 P.M.—Pulse, 72; resp., 24; temp., 99⅖°.

January 17, 8 P.M.—Complains of severe pain in the back about the lumbar region; tongue perfectly clean and moist; limbs free from pain on pressure and otherwise. Pulse, 84; resp., 22; temp., 100 3/10°.

January 18, 10 A.M.—Pain somewhat relieved by a mustard plaster to the back, yet continues; she feels uneasy; appetite diminished. Pulse, 84; resp., 24; temp., 99½°. The wrapping of the leg was discontinued a day or two since. 8 P.M.—Still uncomfortable. On thorough examination of the legs, the left was found again enlarged in the calf, with a return of pain on firm pressure, and a much higher temperature—the exact record was unfortunately not kept—than the other limb, which was entirely free from any symptoms of a similar attack. Pulse, 83; resp., 24; temp., 101⅖°. Pain in the back continuing, a one-grain opium suppository was ordered; other treatment continued.

January 19, 9 A.M.—Feels still uncomfortable, yet rather better than yesterday. *Right leg extremely sensitive*, but not much swollen. Sensitiveness extends over the entire limb, and is greatest in the calf and over the course of femoral vessels. Pain in the back absent, the pain having, as the patient expressed it, "all gone into the leg." Left leg still painful on firm pressure in the calf, but less so than yesterday; and not so in the course of the femorals, or at all above the knee, nor swelling in any part increased. Tongue slightly coated again, but moist; appetite fair; face flushed; skin hot and rather dry. Pulse, 84; resp., 24; temp., 100⅖°. The limb ordered to be wrapped in cotton and elevated, and other treatment to be continued; right leg to be sweated. 8 P.M.—In about the same condition. Right leg very painful when moved, and when even gently touched, but pain not severe when the leg is left upon the pillow. No change in the condition of the left leg. Tongue rather more coated. Pulse quick and small, 105; resp., 33; temp., 102½°. Lung entirely free from disease.

January 20, 9 A.M.—Right leg was sweated last evening, with good result in diminishing pain; swelling not increased. Leg still excessively painful when touched or moved, but almost free from pain when at rest. Region of sensitiveness much more generally diffused over this leg than that first affected, but swelling in the calf is not so great; skin dry; tongue with a slight fur and tendency to dryness. Pulse, 86; resp., 28; temp., 99½°. 8 P.M.—Has had an increase of pain in right leg since 12 o'clock. Pulse small, 93; resp., 24; temp., 102°. Liq. morphiæ sulph. ʒij. Sweating to be repeated.

January 21, 9 A.M.—Was relieved of pain shortly after administration of morphia, and slept pretty well. In about the same condition as yesterday, except that pain is absent when

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quiet. Pulse, 98; resp., 24; temp., 100⅘°. 7 P.M.—Leg still excessively painful to touch or on movement. A blister had been ordered this morning over the femoral vein, and sweating of limb was repeated. Pulse, 94; resp., 23; temp., 102⅘°.

January 22, 10 A.M.—Feels badly, and has pain in right leg. Countenance paler; tongue still moist; skin dry and warm. Both legs hot and dry, but no pain produced by pressure in left. Pulse, 93; resp., 24; temp., 101°. 8 P.M.—Blister was not firmly fixed yesterday, and another was ordered this morning and applied; also morphia gr. ¼ at night, and whiskey ʒiv daily; the iron was stopped, and in its place liq. ammon. acetat. given every three hours.

January 23, 9 A.M.—Slept some hours last night, but has a return of pain this morning. Sensitiveness slightly diminished. Pulse stronger and less frequent, 87 per min.; resp., 21; temp., 101⅘°. Morphia gr. ¼ again. Sweating repeated. Blister has drawn well. 8 P.M.—Pain has returned, after an abatement following the morphia this morning. Sensitiveness of thigh somewhat diminished, but not so in calf, which is rather more swollen. Tongue moist; color of lips and countenance better since increase of stimulus. Again morphia gr. ¼. Pulse, 88; resp., 24; temp., 101½°.

January 24, 10 A.M.—Has slept well, and is free from pain; leg less sensitive to pressure; tongue clean; appetite good; complexion better. Pulse stronger, 76 per min.; resp., 21; temp., 99½°. Has had free perspiration during sickness only when sleeping. 8 P.M.—Still comfortable and improving. Pulse, 81; resp., 30; temp., 100½°. Limb sweated again to-day, and other treatment continued. No morphia given to-day.

January 25, 9 A.M.—Doing well. Tongue perfectly clean. Pulse stronger, 78 per min.; resp., 25; temp., 99⅘°. 8 P.M. —Sweating repeated. Pulse, 87; resp., 24; temp., 100⅕°.

January 26.—Left leg remains well; in right, pain diminishing; still tenderness along the course of the femoral vein, without induration of any of the large venous trunks. An inguinal gland enlarged; has yet pain in popliteal space, but diminished in severity; swelling much reduced since the 23d. There has been great tenderness, also aching pain. Sweating treatment has been continued, but pain was not so much relieved by it as it had been in the other leg; stopped former constitutional treatment, and ordered liq. ferri peracetat. ʒss. every four hours through the day. Heart's action strong; slight systolic blood-murmur towards apex. The patient from this time on convalesced rapidly, and she was discharged February 17, with very slight œdema of legs, but feeling strong and perfectly well.

It is not necessary to enter into a detailed explanation of this case, which I think you will understand in the light of the preceding remarks. But before dismissing the whole subject I will call your attention to yet more general swelling, where the whole of the body increases.

Now, of this *general* swelling following fevers, I have seen some curious cases, and not only in typhoid and typhus fevers, but also in the so-called typho-malarial malady. I will report one to you which was very striking. A few months since I attended a young gentleman with a malarial fever of rather blurred type. Towards the end of it he was very weak, but without decided heat of skin, when his whole body began to swell, his face most noticeably and first, yet the rest of the body soon shared in the great increase. The face was so swollen that he was unable to wrinkle his forehead,—a matter which gave him much distress. The swelling was not accompanied by redness; indeed, the skin was pale, elastic, and only in some parts pitted even on the strongest pressure. The tumefaction was unattended with pain; and I could not find in the state of the heart or of the veins, or in the composition of the urine, the least clue to it. Under iron and diuretics, the disorder lessened; yet it remained after he was so far convalescent that he was able to be about. But on getting up there was this difficulty,—he had no clothes to fit him, and my patient, who had gone to bed a slim young gentleman rather proud of his figure, got up a stout, middle-aged-looking man of portly dimensions. Gradually his annoying corpulency is disappearing, and his friends have ceased to twit him on his suddenly-acquired stoutness.

In cases of this kind the œdema is very deep, and the swelling of the tissues great; yet the pitting is often slight; and the view of there being a more solid exudation than serum, and a coexisting swelling of the muscles, has suggested itself to me; but I have no proof of its existence to offer. The marked anæmia and debility of persons thus affected are always striking; so is the absence of internal dropsies complicating the external affection. And while speaking of these general swellings and their connection with dropsies, let me point out to you a fact which may be of some interest. You know how often in typhoid or typhus fevers, particularly in grave cases, albumen is present in the urine; and it may occur to you, as it did to me, to inquire whether these are the cases in which the swellings under discussion, especially those which are general, follow the temporary albuminuria. They are not. I have examined into the matter in between thirty and forty cases of decidedly albuminous urine in low fevers, and in not a single instance did swelling of the body subsequently happen.

We have thus passed in review the external tumefactions following fevers, both when limited and general, and examined their clinical and pathological meaning. As you will find so little about them in systematic treatises, I venture to hope that the discussion, of which the case before us has been the starting-point, may have proved neither uninteresting nor valueless.

ORIGINAL COMMUNICATIONS.

TREATMENT OF INFLAMMATION OF THE LIMBS

BY CUTTING OFF THEIR MAIN ARTERIAL SUPPLY.

BY S. W. GROSS, M.D.,

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ON Monday, December 16, 1867, I was consulted by Robert Miller, a boiler-maker, forty-two years of age, on account of severe subaponeurotic inflammation of the left hand, for which he had been under the care of an irregular practitioner for ten days previously. The whole hand presented an erysipelatous appearance, being red, glazed, tense, and greatly swollen, and the seat of excruciating throbbing pain, which had deprived him of rest for several days. From the palm the inflammation had extended along the course of the tendons to the fingers, which were twice the natural size, partly flexed, and strangulated at their roots, and it also involved the lower third of the fore-arm. His countenance was pallid and anxious; he had no appetite; the tongue was coated, the pulse was irritable, and he was much prostrated by suffering and loss of sleep.

I at once made numerous incisions in the palm, the fingers, over the anterior annular ligament, and the back of the hand, where the tumefaction was greatest, with the effect of giving vent to a considerable quantity of pus and relieving pain. The limb was enveloped in a large flaxseed poultice medicated with acetate of lead and opium, and kept elevated upon a splint. Morphia was freely exhibited internally, and the system was supported by stimulants, tonics, and a generous diet. Three days later the ring-finger showed signs of mortification, and at this time, with the view of moderating the inflammatory action, I taught his wife to make digital compression of the brachial artery.

On the following Sunday evening, free arterial hemorrhage occurred from the openings in the palm and back of the hand; but it was restrained by the wife, who compressed the brachial artery until the arrival of a physician from the neighborhood, who plugged the openings with lint wrung out of a solution

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of persulphate of iron. At my usual visit on the next morning there was still some oozing, and on removing the plugs, which had been badly applied, the bleeding recurred, which I controlled until the arrival of Dr. Graham and Dr. Allis, with whose assistance I took up the brachial artery above the origin of the superior profunda.

Up to this time there had not been any considerable diminution in the severity of the local symptoms, and the gangrene now involved the third and second phalanges of the ring-finger. On the following morning I found that the swelling had declined, and that the pain, heat, and purulent discharge had also diminished. In the course of a week the hand had regained almost its natural size, and a distinct line of demarcation had formed on the proximal side of the first phalangeal articulation. Ten days later I removed the offending finger at its metacarpal junction, and in a few days more the cure was perfect.

On the 15th of November, 1870, the man came to my office with slight inflammation of the sheaths of the tendons of the muscles of the fore-arm,—the "ténosynite crépitante" of the French writers,—which speedily disappeared under rest and the local application of tincture of iodine. At this time he had so far recovered the use of his hand as to be able to bring the fingers almost in contact with the palm; but the little finger was bent at a right angle, stiff, and useless, from destruction of a portion of the palmar fascia, which had left a puckered cicatrix in the palm.

Remarks.—The foregoing case affords an excellent illustration of the arrest of acute inflammation by starvation, through cutting off the main supply of blood which supports it; although in this, as well as in most of the reported examples of a similar nature, the primary object in deligating the principal arterial trunk of the limb was to control hemorrhage, and not to lessen or check destructive inflammatory action.

In an elaborate historical article "On the Treatment of Inflammation of the Limbs by the Compression or Ligature of their Main Arterial Trunk,"* Prof. Blackman shows very conclusively that the procedure is of American origin, and awards the credit of introducing it to the notice of the profession to Dr. Henry U. Onderdonk, of New York. On referring, however, to the original paper of Dr. Onderdonk, I find that on June 17, 1814, he took up the femoral artery for consecutive hemorrhage from the articular arteries, in consequence of a longitudinal incised wound of the knee-joint, before inflammatory action had set in, and that he hoped through this procedure to *prevent* violent inflammation and thereby preserve the joint. In his case, therefore, prevention—not the cure—of inflammation was aimed at, and the obviation of inflammation was altogether a secondary object.†

The first attempt to control or check the progress of inflammation when it has once actually set in, by cutting off the arterial supply, appears to have been made by Dr. David L. Rogers, of New York. In "A Memoir on the Utility of Tying Large Arteries in Preventing Inflammation in Wounds of the Principal Joints and Important Surgical Operations,"‡ among other cases, he reports that of a man suffering from acute inflammation of the knee-joint, in consequence of a penetrating wound by a gouge. In consultation with Dr. Mott, "it was determined to cut off the supply of blood by securing the femoral artery in a ligature." The result was most gratifying; in a few days the pain and swelling had completely subsided, without any further discharge of synovia, and on the fifteenth day the wound had entirely closed. This operation was performed on the 4th of August, 1824, and was followed, on the 3d of September, by a similar procedure in the hands of Dr. Mott, for acute inflammation of the ankle-joint from compound dislocation. The man did remarkably well until the seventh day from the accident, when tetanus set in and death ensued.

It would thus appear that Dr. Onderdonk ligatured the femoral artery to combat hemorrhage following wound of the knee-joint, while Dr. Rogers practised the operation to control existing inflammation of the same joint from traumatism, a treatment reintroduced to professional attention in a similar case by Mr. Maunder on the 13th of May, 1867.§ Dr. Rogers does not, however, make a distinct claim of originality. Indeed, it would seem as if he had merely acted upon the suggestion of Dr. Mott, as, in speaking of his objects in writing the essay, he says, "It is my intention to show, first, the inefficacy of the ordinary mode of treatment in wounds of the large joints, and, secondly, to invite the attention of surgeons to the propriety of cutting off the supply of blood to parts endangered by inflammation. This is a practice which has been frequently urged by Professor Mott from the surgical chair; . . . and I would here acknowledge my obligations to that gentleman for my first idea upon this subject, with the practical lessons that he has so frequently given me of its importance."

The hope expressed by Dr. Rogers that the practice of tying large arteries will become an established and important rule of surgery in the treatment of inflammation has not been realized. With the exception of the cases already quoted, his example has not been imitated; in all other instances where inflammation has been observed to be lessened or checked by arterial deligation, the arrest of hemorrhage prompted the operation. In a pamphlet published in 1866 and entitled "The Hunterian Ligation of Arteries to Relieve and Prevent Destructive Inflammation," Professor Henry F. Campbell has adduced cases in which he tied the brachial and femoral arteries in consequence of secondary hemorrhage from gunshot, the limbs being in a state of severe inflammation and even gangrene. In all of these cases the rule of Mr. Guthrie was departed from, and the main trunk ligated, "with the distinct end in view of combating and checking, if possible, the destructive progress, and, in some, the septic tendency, of the inflammation. In all of these, the pain, the swelling, and turgescence were almost immediately relieved, and the most remarkable change was soon presented, as seen in the character of the discharges." Dr. Daniel F. Wright, of Clarksville, Tennessee, in an article "On the Therapeutic Effects of the Ligation of Large Arteries,"‖ sustains the practice of Dr. Campbell, his deductions having been drawn from cases of a similar nature, in which deligation was resorted to for arresting hemorrhage and with equally good results. He does not, however, go so far as Dr. Campbell in advocating the procedure for the relief of inflammation alone, but would restrict it to cases in which, in consequence of the violence of the morbid action, erosion of large vessels was threatened.

I report my own case simply as a proof in favor of the utility of arresting the circulation in inflamed parts. What has been done by the ligature may and has been accomplished by simpler and safer modes of treatment; and I agree with Professor Blackman that deligation of the main artery of a limb is a very serious operation, and one not to be lightly undertaken. With the exception of Dr. Rogers and Dr. Campbell, and possibly Mr. Maunder, the proposed treatment has not met with favor, since experience has demonstrated that other methods are equally effectual. In 1867, Professor Vanzetti,¶ of the University of Padua, proposed digital compression of the main artery for the cure of phlegmonous or articular inflammation of the extremities, and

* *The Cincinnati Lancet and Observer*, N. S., vol. xi. p. 74.
† *American Medical and Philosophical Register*, vol. iv. p. 176.
‡ *New York Medical and Physical Journal*, vol. iii. p. 453.
§ *London Lancet*, vol. i., 1867, p. 751.
‖ *Richmond Medical Journal*, April, 1866, p. 315.
¶ *Comptes Rendus*, t. xlvii. pp. 471-5.

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detailed two cases as illustrations of the efficacy of this treatment; one being an instance of bad phlegmonous erysipelas of the arm, cured by compression of the subclavian artery, and the other a case of acute arthritis of the wrist, successfully managed by compression of the brachial artery. So manifest have been the advantages derived from manual compression that it now forms the ordinary means of treating such cases at the Padua clinic. It need not be continuous, and the patient may be taught to exert it himself. In general, it need only be maintained for eight or ten minutes, and, after resting, again resumed. Professor Nélaton, in a case of inflammation of the hand after a lacerated wound necessitating amputation of a finger, obtained good results from compression of the brachial artery;* and I taught the wife of my own patient how to compress the same vessel, with directions to resort to it as often as her ordinary household duties would enable her. From the indifferent manner in which it was exercised, it appeared to exert no influence whatever; but it did capital service in another way. I had explained to her that the compression was intended to cut off the supply of blood to the inflamed hand; and, being an intelligent woman, when secondary hemorrhage occurred, she argued that the same measure would restrain the bleeding, and she was thus enabled to control it until the arrival of a physician.

The same principle of practice has been carried out in other ways. Thus, Mr. Jackson, of the Sheffield Hospital, subdued an inflammation of the knee-joint, consequent upon punctured wound, by compression of the femoral artery with a tourniquet for forty-eight hours;† but the disadvantage of the use of an instrument is obstruction to the venous return. The *Lancet*, December 7, 1867, has briefly noticed "a case of severe traumatic inflammation of the hand, under the care of Mr. Moore, at the Middlesex Hospital, in which the compression of the artery was procured by acupressure. The treatment here was quite successful."

Upon the whole, manual compression is to be preferred to other measures which have for their object the arrest of the circulation in badly-inflamed parts. It is perfectly harmless and simple, and does away with the dangers of mortification of the limb, which may ensue when deligation, acupressure, or mechanical compression of the main arterial trunk has been practised. I would have resorted to it myself, had I been able to procure a sufficient number of intelligent assistants; and this is the only objection that can be urged against it.

In instances similar to the one that I have narrated, the hemorrhage and inflammation might both be checked by ligation of the radial and ulnar arteries above the wrist, as was done by Mr. Brown, of the Sheffield Hospital, who arrested the bleeding from a wound attacked by sloughing phagedæna at the same time that he put a stop to the phagedæna.‡ In the case of Miller, ligation of those vessels was out of the question, on account of the inflamed and swollen condition of the fore-arm. Ligation of the brachial artery is, however, in my judgment, a better operation, since the circulation is still maintained in very many instances by the interosseous artery when the radial and ulnar arteries have been tied, and the hemorrhage is almost certain to recur. Should the bleeding not return, we can scarcely expect more than a temporary effect upon the inflammation, as the anastomoses between all the vessels about the wrist are so free that the collateral circulation is soon established. Securing the brachial artery above the superior profunda branch prevents the rapid formation of the collateral circulation, and time is thus given to the inflamed parts to regain their tone.

* *Gazette des Hôpitaux*, 1867, p. 114, and *Biennial Retrospect* for 1867-8.
† *London Lancet*, vol. i., 1867, p. 794. ‡ *Ibid.*

THE APPLICATION OF LOCALIZED MOVEMENTS

TO THE TREATMENT OF CERTAIN FUNCTIONAL NERVOUS DISORDERS.

BY WM. R. FISHER, M.D.,
of New York.

(*Concluded from page* 115.)

PART III.

THE cases of bedridden women which have been cited had both been pronounced by reputable physicians to be hysteria; and in that decision it is probable that the majority of readers will concur. And if by that term is meant a functional nervous disorder, implicating the various organs of the body, to a greater or less extent, in abnormal and irregular manifestations, independent of the influence of the imagination as a determining cause, and curable by a treatment directed to the nervous system through psychological agencies, it may be accepted as a proper term. But the old idea of the dependence of "hysteria" upon local disease of the uterus, notwithstanding the efforts of many modern authors to correct it, is still so deeply engrafted in the minds of the profession at large that it seems to be impossible to remove it. When called to such a case as we have described, the first step in the investigation is to attack the uterus as the head and front of the offending; and if a slight displacement or a trifling disorder in the menstrual function can be detected, or the presence of leucorrhœa can be established, the routine practice is to direct a local treatment to this organ for the removal of the general symptoms. It is too often forgotten that, as the genital apparatus necessarily participates in the relaxation which affects the tissues throughout the body in these cases, displacements of the uterus should therefore be anticipated in them, and that the disturbances in function which may be presented in the organ are as much entitled to be regarded as symptomatic of a general cause as those which are to be found in the digestive organs or the muscles. It is true that a serious affection of the uterus may act as a shock upon the system at large in such a way as to produce the condition which has been described; but a comprehensive experience has established the conviction that the occurrence of disturbances in uterine function is much more frequently its sequence than its cause. If the physician be unsuccessful in his search for a diseased uterus upon which to commence his assault, it is then the common practice to accuse the patient of parading her imaginary woes for the purpose of exciting the sympathies of her friends, and to urge a course of treatment in accordance with this idea; but the inability to recognize the *reality* of the impressions which are transmitted to the mind of the patient who suffers from these functional nervous disorders, perverted though they be, and inexplicable by the slight amount of organic lesion to which they may be attributed, is the secret of the failure which attends the efforts of practitioners to cure them,—efforts which are futile because misdirected. Instances of pretended or imagined symptoms, similar in many respects to those which have been presented in the preceding cases, are to be met with occasionally among weak-minded women; but to such the present article is in no way applicable, nor can the term "hysteria" be admitted as a proper title for the condition of which it treats, if it is to be restricted to them.

But ill success in treatment, instead of bringing about a correct appreciation of the true nature of the case, is too often set down as due to a mistake in localizing the affected organ, and hysteria yields to the still more indefinite hypothesis of "spinal irritation," based upon the hyperæsthesia which is an almost constant symptom, and is usually most strongly marked along the

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course of the spinal muscles. Counter-irritation by setons, blisters, or less powerful applications is now employed, to the decided injury of the patient, by depressing still further her enfeebled powers. This symptom of back-ache is one of the early indications of failing strength. Its seat is entirely muscular, and the hyperæsthesia shows itself primarily in this locality because in these cases the muscles which sustain the spinal column are more severely and constantly strained than any other in the body. But, instead of resorting to suitable hygienic measures to restore the overtaxed system, the patient, failing to recognize its true significance, is apt to attempt to overcome the growing sense of feebleness by increased exertion; and hence in practice innumerable instances are met with in which this local hyperæsthesia, together with malaise and a general enfeeblement, are the only indications of the development of functional nervous derangement which, if unchecked, may in time involve the whole body. The advocates of the theory of "spinal irritation" lay great stress upon the presence of tenderness along the spine on pressure, and claim that herein is to be found a positive indication of local disturbance within, though, physiologically considered, the pain in the back is no more an evidence of disease in the spinal cord than the headache which often accompanies it is a sign of cerebral disease. They have mapped out the cord into three regions, each productive of a distinct set of symptoms when involved, but they do not agree among themselves as to the nature of the morbid process which gives rise to so much mischief. Some authorities attribute it to congestion of the cord, while others ascribe it to anæmia. But it is difficult to conceive how either theory can be correct, when we remember that cases are often quoted as having existed for months and years without leaving any lesion behind. It has been shown that the sensory function may be perverted in a variety of ways in these cases of bedridden women. It may be diminished or altogether absent in certain localities, or it may be intensified; and the latter is more commonly met with. The organs of special sense are especially liable to present this excess in function, and the patient may actually be capable of seeing, hearing, tasting, and smelling what would be imperceptible were she in a normal condition. She is unable to endure the admission of light into her room, and remains for months in almost total darkness, or perhaps she is irritated beyond endurance by the sounds of conversation carried on in ordinary tones in a distant part of the house, or by the sound of the needle and thread in sewing. Certain articles of food, of which she was fond when in a state of health, have now become disgusting to her, and the odors of flowers are perhaps nauseating. The nerves of ordinary sensation also frequently manifest their participation in the state of general hyperæsthesia. At times it is distributed over the whole body, so that the slightest touch upon any portion produces the most acute distress to the patient; but more frequently it is confined to certain localities, under the form of neuralgias, pseudo joint-affections, persistent headaches, or back-aches. But, besides these customary evidences of morbid excitation in the nerves of special sense and sensation, there sometimes exist a series of perverted sensations in the viscera. The processes of organic life, which in the normal state are not made manifest to the sensorium, may thus become sources of positive pain and distress. The heart and great vessels may be the seats of alarming pulsations or palpitations, not always, however, appreciable to the physician; the respiration may in like manner be distressing and disturbed, and the bowels and stomach may furnish subjective symptoms of serious disorder. Can it be possible that a condition of the body, embracing at one time all of these evidences of functional disorder of the cerebro-spinal and sympathetic nervous systems, may correctly be ascribed to a local, vascular disturbance of the spinal cord, which continues for many months without abatement, and yet, under the simple treatment already described, can be totally removed? If it be so, the spinal cord has certainly been gifted by nature with powers of endurance and reparation far in advance of other organs.

In approaching his case, the physician should disabuse his mind completely from the idea that he has to deal alone with a morbid and perverted imagination. The persons who are bedridden from functional disorders are not usually weak-minded women, naturally predisposed to an ascendency of the emotions, but, on the contrary, the intelligent, the cultivated, and those who are accustomed to devote much of their time to works of benevolence and charity, with too little regard for self-interest in matters of comfort, occupation, and health, make up in large proportion the bulk of sufferers from this variety of nervous disturbance. It is true of this condition, as of all others in which there is prolonged suffering, whether dependent on functional or organic derangement, that the mind yields at last to the influence of a continued series of morbid impressions, and becomes a powerful agent in perpetuating a state of emotional excitement; but in tracing back the case to its starting-point it will usually be found that the morbid self-consciousness which is often a prominent symptom has slowly been evolved from a mental condition originally diametrically opposed by a sudden or gradual shock acting upon an overtaxed organization. Excessive mental and physical labor in connection with our charitable associations, or in individual efforts to contribute to the slender means of a struggling family, are prolific agents in producing this condition among our women; while the influence in the same direction of sudden shocks upon a person in feeble health, as by physical injury, unexpected reverses in fortune, domestic affliction, and the like, may readily be appreciated. An acute disease may in its subsidence leave the patient in a state of utter helplessness, from which recovery does not take place because the mind remains unconscious of returning strength. It may be associated with a chronic disease of some particular organ, or the determining cause may act so insidiously as to elude the notice of the patient and physician. But it is probable that the majority of cases which arise between the ages of twenty-five and thirty-five have their origin in the peculiar relation which exists between the female organization and the proper gratification of the maternal instinct. The state of marriage is wellnigh an absolute essential to the perfect health and happiness of a woman, since, by entering it at a suitable age, not only is the sexual appetite turned from channels of immoral thought and practice to the performance of its physiological function, but occupation and an aim in life are supplied for mind and body, as designed by Nature for the maintenance of the necessary equilibrium between her vital forces. The influence of an opposite course of life, when too far prolonged in women after puberty has been attained, in producing functional disturbances of the nervous system, has long been recognized.

Comprehending the essential element of the condition which he is about to treat,—a disordered perception and volition, and not a whimsical imagination,—the physician's first step in preparation must be to obtain the full confidence of his patient; but, thanks to the blunderings of his predecessors, this is often an arduous task. She has been told, perhaps, by one doctor that she is suffering from "spinal disease;" by another, that the uterus is the seat of her trouble; by a third, that spinal congestion or irritation is the cause of her many ailments; until at last she has become disgusted with the varying opinions which experts have offered in her case, and has lost all faith in medical skill to relieve

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her. Her friends, perhaps, through ignorant advice, have been led to believe that she is merely "hysterical," and, turning from a course of irksome condolence and sympathy, have assumed a tone of unbelief in the reality of the feelings which she describes, and are incessantly urging her to exertions which her consciousness tells her are far beyond her powers. Against these accumulated errors the influence of the physician must be exerted to explain the true origin of her affection, to reconcile the multiplicity of its manifestations with the unity of their cause, and to obtain an absolute reliance in the correctness of his directions for its cure; and not until he has surmounted these obstacles is he ready to commence the treatment. It is usually necessary to allow an interval of a few days to elapse before active measures are adopted, and to wait until some indication of reaction from the despondency which is usually present is manifested. This may, however, be materially shortened by unobtrusively directing the thoughts of the patient into the new channels which he has opened, and by taking care that those around her shall assist by their tone and manner in reawakening her confidence and cheerfulness. The process by which the treatment is conducted is immaterial, so long as the indication to be fulfilled is kept clearly in view; and the main features have been described with sufficient precision in the cases already cited to obviate the necessity for repetition. Any procedure which may tend to control the attention, to correct morbid perception, and to educate the powers of the will, is treatment rightly applied, and the physician must rely upon his own judgment and tact in the choice of means. He must understand that it is not the province of the "movements" to cure his patient by virtue of a specific power or influence, and he must use them solely as the most effectual means to subdue the nervous manifestations and to correct abnormal function. To this end he should avoid as far as possible the attempt at palliating distressing symptoms by medication, teaching his patient to look for relief in the gradual rejuvenation of her powers rather than to temporary aid from drugs.

There are certain opposing circumstances which may militate against a successful issue in dealing with these bedridden cases. If there be an incurable organic disease which by its reactive influence tends to the continuance of the functional derangements, it is probable that little can be done for their relief. The existence of a stubborn wilfulness on the part of the patient, or the absence of the necessary moral qualifications in the physician to insure a complete control and bring about in her a submissive obedience to his directions without question or reservation, will also effectually prevent the establishment of that psychological relation between them which is, in fact, the prerequisite to success. Again, the domestic surroundings of these patients may tend to subvert our best efforts. The relatives, who may be in constant attendance upon them, are seldom capable of controlling their natural impulses sufficiently to divert those influences which act as disturbing causes through the emotional faculties. Unskilled in the niceties of management which are required, they are unable to tell when to oppose and when to yield, and therefore either assume a forced attitude of rigid opposition, which alarms and excites the patient, or, as is more usual, give way too readily to their feelings and interfere with the exercise of the moral control which we aim to develop. The progress of the case from day to day is discussed, the probable duration of the treatment is canvassed, the indications of success or failure are carefully weighed, —in short, every passing feeling which may relate to the object of their solicitude finds expression in their daily conversation. A patient may thus be kept in an atmosphere of emotional excitement, to her positive injury, which no efforts of the physician can remove. It is always more difficult to manage these cases at home than in a private institution, where the usual associations and surroundings are completely broken up. The course of recovery will frequently be slow, even under conditions the most favorable to a well-regulated regimen, nor will it answer to attempt by a sudden impression an overthrow of the derangement which for months or years has swayed the organism. Such a plan, though sometimes apparently successful in the hands of charlatans, is rarely lasting in its effects, and presents the great danger in its application that, if it fail, the confidence of the patient is immediately lost, perhaps never to be regained. Progress should, then, be gradual, bearing in mind that it is the restoration of power which is aimed at, not the development of muscle.

The object of this article has not been to point out any new features in the symptomatology of these functional nervous disorders, which have been recognized for a long time, but to reiterate the theory of their causation which was advanced by Dr. Charles F. Taylor in 1868, and to add some illustrations of the applicability of the plan of treatment which he explained at that time. Inman, Skey, Murray, and others have directed the attention of medical men to the existence of disorders depending upon nutritive derangements of the nervous system, and have done much towards the removal of erroneous opinions, but Dr. J. Russell Reynolds, in the *British Medical Journal* for November 6, 1869, has advanced still farther in the right direction. He therein states that some of the most serious disorders of the nervous system, such as paralysis, spasm, pain, etc., often depend on a morbid condition of emotion, of idea and emotion, or of idea alone. By these expressions, however, Dr. Reynolds does not mean to imply that the condition which he describes is in any way a product of a morbid imagination, for in the interesting cases which he quotes he lays particular stress upon the reality of the symptoms so far as the patients are concerned, distinctly stating that they "may occur independently of anything that could be called either insanity of mind, hysteria, hypochondriasis, or malingering," though admitting that these may arise as complications. He recognizes the primary cause to be morbid impression, arising from a determining shock, either sudden or gradual, acting upon a system impaired in its nutritive functions, and suggests that this "morbid impression may be perpetuated after the manner that certain impressions may be retained by the organs of special sense after the removal of the first producing cause." The treatment which he proposes is directed to the alteration of the affected volition and perception, and is practically the same as that which we have described.

We have seen that these disorders are dependent in many instances upon functional disturbance unconnected with organic change, giving rise in various degrees to perverted or defective volition, increased activity of the emotions, and altered, exaggerated, or diminished perception. On the other hand, the proximate cause is frequently to be found in distinct and definite disease. To the practitioner, the ability to recognize in the symptomatology of his cases how much is due to organic lesion and how much to abnormal perception and impaired volition, is of the utmost importance as an element in diagnosis and treatment.

NARROW PELVIS—EARLY ARTIFICIAL DELIVERY.—Dr. Otto Spiegelberg, of Breslau, has undertaken to show (*Lancet*, November, 1870, p. 677) by statistics that the results of the induction of premature labor are less favorable than the consequences of waiting for natural delivery, even when the conjugate diameter is a little less than three inches.

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NOTE ON THE PHYSIOLOGICAL EFFECTS OF CARBONIC OXIDE.

BY PROF. A. R. LEEDS.

I ACCIDENTALLY respired, some time ago, a quantity of pure carbonic oxide. The gas was contained in a quart bottle, from which I inhaled certainly less than a pint—probably a quantity not exceeding a gill—into my lungs, previously exhausted through expiration of atmospheric air. For a moment no change of mental impressions or of bodily feelings was noticeable. The next, without any intermediate condition, I was struck senseless to the floor. Fortunately, the bystanders rushed immediately forward, tore open my clothing, poured water upon my wrists and head, and applied violent friction to my limbs. The pulse had stopped beating, or beat so feebly that in the agitation of the moment it was imperceptible; the chest had ceased to expand and contract, the complexion had assumed the livid hue of death, and the temperature of the body was rapidly falling. The operation of the carbonic oxide was so immediate as to prevent the lungs from throwing off the single charge they had received, and the shock arising from the remedies employed probably enabled them to do so. A slight nausea, which passed off in the course of a few hours, and a dulness and oppression in the crown of the head, lasting some time longer, were the only effects which remained after restoration to consciousness.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF JAMES H. HUTCHINSON, M.D.

NOTES ON THE TREATMENT OF ACUTE RHEUMATISM.

(Abstract from a Clinical Lecture delivered Wednesday, Dec. 21, 1870.)

THE case which I now bring before you is one of acute rheumatism, not, however, of very great severity. The notes of the case were taken by Dr. Gerhard, and are as follows:

Sarah McC——, aged 49. Irish; cook; married; admitted December 2, 1870. No family history of any tendency to disease. Health previous to present sickness has been good. Had an attack of rheumatism that came on suddenly after exposure to cold and damp. The attack lasted seven weeks, and left her right arm crippled. She regained her general health, and continued well until about four weeks ago, when after exposure to cold and wet she was seized with severe pain in the left wrist, which was aggravated by motion and pressure. She had slight fever; no sweating. On admission the patient was pale and anæmic. Ordered ammon. bromid. gr. xx q. q.h. and good diet. Distinct systolic blowing murmur heard both at base and apex of heart; soft in quality. No albumen in urine.

Dec. 5.—Temp. 98¾°. Dec. 6.—A.M., pulse 79, resp. 26, temp. 99°. P.M., pulse 76, resp. 24, temp. 98¾°. Murmur not quite so distinct. Slight dulness at base of heart, indicating, it is thought, a little pericardial effusion.

Dec. 8.—Pulse 82, temp. 98½°.

Dec. 9.—Pulse 84, temp. 98½°. Pain in wrist has very much diminished. Complains occasionally of muscular pains in back and thighs.

Dec. 10.—Pulse 96, temp. 99°. Bowels constipated.

Dec. 11.—Pulse 84, temp. 98¾°.

Dec. 12.—Pulse 88, temp. 98½°.

Dec. 14.—Pulse 88, temp. 99°.

Dec. 15.—Temp. 98°.

Dec. 16.—Temp. 97¾°. There is now merely prolongation of the first sound at the apex of the heart.

Dec. 18.—Pulse 72, temp. 97½°. Some return of pain to the wrist. To be blistered.

Dec. 21.—Vesication has not been produced, but pain has been relieved. No elevation of temperature has been noted since the 14th.

I have introduced this case for the purpose of making a few remarks as to the treatment of acute rheumatism. It is obviously a matter of more importance to prevent, if possible, the occurrence of cardiac complication, than to shorten the duration of the fever; but experience has demonstrated that a remedy which has apparently the power of fulfilling the latter indication is not less useful as regards the former. The alkalies given in the doses recommended by Dr. Fuller, of London, undoubtedly diminish the temperature, shorten the duration of the attack, and diminish the liability to cardiac complications. They do not, however, prevent the occurrence of relapses, and if long continued certainly produce a condition of anæmia, which prolongs the convalescence, and consequently the stay of the patient in the hospital. The great bulk of the dose is likewise an objection,—a minor one, it is true, but still an objection less likely to be overcome in this country than in England, where large doses prevail. Soon after my election to the position of visiting physician to this hospital, I adopted the treatment proposed by my colleague, Dr. Da Costa, who gives the bromide of ammonium in doses of fifteen to twenty grains every three or four hours. The number of cases treated in this way by myself are as yet insufficient to allow independent conclusions to be drawn from them, but the results are to a great extent, at least, confirmatory of those already published. I have found that the administration of the remedy was generally followed by diminution of the number of pulsations of the heart, by a lowering of the temperature, by a subsidence in the local symptoms, and by a marked decrease of the pain and discomfort. The urine is perhaps slightly increased in amount under its use, but continues to have an acid reaction, so that the relief of the symptoms is not due to the production of an alkaline condition of the blood and of the secretions. In but one case has a cardiac complication developed itself where I could reasonably suppose that the system was under its influence, and in but one case, the one just referred to, has a relapse occurred. The average period of treatment is perhaps longer than that claimed for his treatment by Fuller, but, on the other hand, convalescence is more rapidly established and patients are able to return sooner to their occupations. Small doses of opium or of some of its preparations were occasionally given, but never in sufficient quantity to influence the result. As soon as the thermometer indicated the absence of fever, or sooner if there was evidence of the presence of the typhoid state, cinchona or some of its preparations were given. Beef tea and stimulus were always given where there were any indications for their use. In a few of the cases the bromide purged, but this effect was generally not produced until after it had been taken for some days and a decided modification of the symptoms had been produced by it. The purging, moreover, was generally held in check by the use of opium suppositories.

The local treatment adopted in the hospital is very simple, and consists in placing the inflamed joint in the most comfortable position and surrounding it with raw cotton or wool. If there be a tendency on the part of the disease, as in the case before you, to become fixed in a joint, the application of a blister may frequently be of advantage.

The endocardial murmur in this case appears to me to be of anæmic origin, as it certainly possesses many of the characters of murmurs of that class. The pericardial effusion was slight in amount, and was evidently not dependent upon active inflammation of the pericardium. If, however, there had been evidences of either endo- or pericarditis, I should have given small doses of digitalis in conjunction with the bromide, and continued its use so long as the pulse continued regular; and if there was pain in the præcordia, enough opium to relieve it. When effusion has taken place and the violence of the inflammation has somewhat subsided, a blister over the heart will generally promote absorption and hasten the return to health.

It will have been noticed that the thermometer on several occasions indicated a temperature of only 97°. In my experience an abnormally low temperature is not infrequent during

* For a paper on this subject, see Pennsylvania Hospital Reports, vol. ii.

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the defervescence of rheumatism, which is sometimes indicated by a very rapid fall.

I may add, in conclusion, that the inflammation of the wrist, which occurred some years ago and was followed by suppuration, could scarcely have been of rheumatic character.

EPISCOPAL HOSPITAL.

SERVICE OF JOHN H. PACKARD, M.D.

CASE OF SEVERE TRAUMATIC TETANUS, RESULTING FAVORABLY UNDER THE USE OF CALABAR BEAN.

JOHN O'NEAL, aged 10, a stout, healthy boy, was struck on the back of the head with a brickbat, September 17, 1870. A severe wound of the scalp, a little to the right of the median line, resulted, and he was treated for this at the Hospital Dispensary,—no fracture being then detected.

On the 27th, paralysis of the right upper eyelid was noticed; and on the 3d of October, sixteen days after the receipt of the injury, he was admitted into the hospital. He then had severe trismus, a marked sardonic grin, the head forcibly retracted, and the whole spine in a state of rigid opisthotonos. Convulsions occurred about every two hours, during which all the symptoms were intensely aggravated. Bare and roughened bone could be felt at the bottom of the wound. He was put at once upon ext. physostigmæ gr. j every two hours, with ext. opii. gr. ¼ to control the convulsions. The first and second doses of the former acted decidedly upon the pupil, which was afterwards unaffected. Concentrated nourishment was given, and subsequently free stimulation. Dry cupping along the spine, ice to the nape of the neck, and chloroform by inhalation, were also employed, but apparently with very little effect.

On the 6th of October, nineteen days after the injury, the symptoms being increasingly urgent, I enlarged the wound, and applied the crown of a trephine. By so doing I loosened a fragment of bone, which was removed, together with three others; some pus and ʒss or more of brain-substance came away.

On the 10th, Dr. J. R. F. Bell, the resident surgeon, noted priapism, and complete closure of the jaws. The patient had to have his urine drawn off with the catheter twice or thrice daily, and his bowels emptied by enemata.

On the 16th, Dr. B. notes, "He has taken gr. ij of the extract of calabar bean every hour for the last four days; pupils normal."

On the 19th, the dose was increased to gr. iij every hour. Pupils dilated. The trismus was so far lessened that he could open the jaw to eat with a spoon.

On the 24th, he had had but one convulsion the previous night, and passed his urine naturally. Pulse, 84. The calabar bean was stopped for a few hours, *and the pupil contracted greatly*.

On the 26th, pulse 80, and all the symptoms much lessened.

October 28.—Still improving; he passed his urine to-day without the aid of the catheter. Dr. Bell notes that "the second dose of the calabar bean, given to-day, contracted the pupil strongly, and caused nausea and vomiting, abdominal pain, and repeated purging. For an hour the radial pulse could not be felt, and the heart was found by auscultation to be beating only forty-eight times in the minute, very feebly." Tr. belladonna, in ʒiij of whiskey, was given at once, and repeated twice at intervals of half an hour. After the third dose the pupils were slightly dilated, the abdominal pain relieved, and the pulse rose to 60. No more belladonna was given; the calabar bean was suspended for twelve hours, ½ gr. being then administered every three or four hours with marked effect. (It was ascertained that this was a new sample of the extract of calabar bean.) From this time the improvement was steady. A small piece of bone came away November 7, and another November 9. By the 28th, fifty-three days after the trephining, the only remaining symptom of tetanus was a slight grin, which finally passed away imperceptibly. He grew very fat and hearty, and on December 22 was taken into town to be photographed.

December 30.—He is in excellent condition. The wound has, however, not entirely healed, and there is some tenderness of the occiput, especially near the median line. I cannot, therefore, regard him as wholly free from danger of the occurrence of future symptoms, although the condition of tetanus has been altogether set aside.

The points of interest about this case will readily suggest themselves. The severity of the injury sustained, and the actual existence of a lesion of the brain; the gravity of the operation required; the fact of escape of a portion of brain-substance,—all these things seemed to me at the time, as they still do, to have more than offset the favorable circumstance that he had already resisted the disease, when trephined, for a period of nineteen days.

Another point calls for notice,—namely, the great variation in energy between the two samples of extract of calabar bean employed, showing the necessity of caution in dealing with this remedy. This I have seen in one or two other instances in which I have used it as a spinal sedative. I might mention here that among other publications on this subject, in a discussion at the Clinical Society of London, October 14, 1870 (reported in the *British Medical Journal* for October 22), upon a case of traumatic tetanus successfully treated by Dr. Ogle by means of belladonna, Dr. Anstie stated that Dr. Eben Watson had treated at least three cases with calabar bean, with favorable results; and Dr. Broadbent mentioned another which had recently come under his own observation. Mr. John Croft spoke of a case in which the calabar bean had failed.

THE PRODUCTION OF ASTHENIA OR ANÆSTHESIA IN SURGICAL OPERATIONS BY COMPRESSION OF THE VAGUS NERVE (*The Practitioner*, December, 1870).—In a short paper, probably the last ever written by its distinguished author, the late Dr. Augustus Waller, of Geneva, shows that pressure exerted upon the vagus nerve in the neck produces on man most of the principal symptoms observed on animals when that nerve is isolated and subjected to the direct influence of galvanism. Upwards of twenty years ago, when studying the subject of compression with reference to hysteria and epilepsy, two cases occurred where compression of the vagus was followed by all the symptoms described by Aristotle. "In each case the patient, after moderate pressure, fell down, as if struck by lightning, on the floor before me, like a lifeless corpse, with all the voluntary muscles completely relaxed. Scarcely had I time to become alarmed, when sensation and voluntary power returned, although for some time afterwards there remained considerable weakness and debility, though not sufficient to prevent the patient from walking away unassisted."

These symptoms appear to the ordinary observer to be attended with considerable danger, but such, in reality, is not the fact, as the heart is always found to be pulsating, and the respiration in play. He therefore recommends its adoption in cases where the abolition of muscular power may be desirable, as in instances of dislocated bones of difficult reduction, previous to the employment of the ordinary anæsthetics, the administration of which is attended with a certain amount of danger. As an illustration of the practice, he narrates the case of a powerful, athletic man, in whom, in consequence of a fall, the head of the humerus was dislocated beneath the clavicle. An ineffectual effort had been made to reduce it without chloroform, and, while the messenger was procuring that agent, compression was made of both vagi, while extension and counter-extension were kept up. At the end of two or three minutes, just as the two carotids could no longer be felt beating beneath the fingers, a sudden click indicated the return of the bone into its socket.

As an illustration of the anæsthetic effects of vagal pressure, he says, "A molar tooth was extracted from an out-patient of the Hôpital Cantonel by one of the house surgeons. While the patient was seated, I was prepared, at the back of the chair, to apply pressure on both vagi. As soon as the key was gently applied around the tooth, I began the pressure, and gave a sign to the operator to commence. The result was perfectly satisfactory. According to the statement of the patient, she had suffered no pain, and was most enthusiastic in her thanks to me. At the moment of extraction the patient cried out, which, however, occurs in many instances with chloroform, where, as in this case, the patients afterwards declare they have not felt any pain."

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THE MEDICAL TIMES.
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EDITORIAL.

MEDICAL STATISTICS.

No. I.

WE do not understand the German people; we never did, and we never shall. Their ideas of gay relaxation range from beer and Limburger cheese to merry-makings over metaphysics, to theological quilting-parties, and—for aught we know—to adapting minuets to the stately cadences of logarithms. A ponderous treatise on the Greek Article—why did the Greeks ever use articles?—they call an *excursus;* whilst, ten to one, the frisky word *prolusio* will head the dreariest disquisition on the Sanscrit, or on some other stone-dead language.

We are led to these remarks by some facts elicited in a controversy upon "The Importance of the Arithmetic Means in Physiological Researches,"* which took place not long since between Professor Radicke, of Bonn, and Dr. Beneke, of Marburg. The latter, it appears, spent a few days of a well-earned vacation at two fashionable watering-places on the shore of the North Sea. But, instead of italicizing in his note-book or adjusting to wild dithyrambic measure the "urging waves," the "chiding pebbles," and the "scolloped shells" of the beach, or the "sandalled shoon" and bare feet of the importunate beggars who infest those places, he deliberately called—not for a *demi-tasse*, but—for a *pot-de-chambre*, and thereupon commenced a series of experiments upon his own secretions.†

Behold, O friends! a man and a brother, who, instead of holding sweet commune with Nature, as her friend and equal, attends to her calls like a menial; a man and a brother, who, as it were, in a Cape May hotel, gay with fashion and beauty, canorous with the festive fiddle, calmly sits down to make quantitative analyses of his urine. O Truth, how strange thou art! Hide, Fiction, hide thy diminished head! Language fails us, but not Professor Radicke. Nothing can be more delicate than his rebuke; it has the bouquet, the aromatic efflorescence, of Pascal's wit.

After very properly taking Dr. Beneke to task for the means he employed,—and very bad ones they were indeed,—not because they were ill timed and ill placed,—as we should have done,—but because they were neither the "Arithmetic Means," nor the "Successive Means," nor the "Quadratic Means," nor the "Harmonic Means," nor the "Geometric Means," Professor Radicke neatly spits him somewhat after this fashion: "My good friend! the means of the squares of the fluctuations of your urine are $\frac{1792807}{12} = 149401$ and $\frac{861316}{12} = 71776$, and, finally, $\sqrt{149401} = 386$, and $\sqrt[12]{71776} = 268$. Therefore, the mean fluctuations, indicated by μ and ν in Section VII., are 386 and 268; and their sum, 654, is, consequently, considerably greater than the mean difference, $1549 - 1499 = 50$, which is more than sufficient to indicate a negative result."

"More than sufficient to indicate a negative result"! Of course it is "more;" it is a great deal more than "more:" to our mind the whole result is an intensely negative one. But, pray, what else could be expected from a man who took his sea-air in the form of urate of ammonia, and never once so much as asked the wild waves what they were saying?

We frankly confess—*bonum est confiteri*—that, given a secreting kidney, a few test-tubes and reagents, a microscope, and perhaps a spirit-lamp, we thought all the necessary analyses of urine could be made, without any assistance from the Arithmetic Means. But let that pass; up to this point Professor Radicke has all our good wishes. Unfortunately, however, he now indecently assails the private character of Dr. Beneke,—a sure sign of a weak cause,—and throws out ugly hints that "his manner of living whilst at Wangeroge was different from that at Oldenburg;" that "he made fuller dinners, took supplementary breakfasts, and, *above all*, drank more wine;" finally, and very sarcastically, that the metamorphosis of his tissue was very much influenced by "*the stimulus of greater social intercourse*," and, consequently, that those self-sacrificing urinary analyses, made in a sea-shore hotel amid the tinkle and tinsel of endless "hops," all go for nothing. This is cruel in Professor Radicke, and here he should have stopped; but, being in fine fighting-trim, he next gratuitously attacks a Professor Boecker for his experiments with sarsaparilla upon his urine, and proceeds very offensively to extract the root—not the sarsaparilla, but the square root, we mean—from his equations. Professor Boecker is a non-combatant; but it was not in the Teutonic nature of Dr. Beneke to stand such banter on his urine, made in a hostel by the sea,—by sunlight, by moonlight, by twilight, by gas-light, in a hostel by the sea. We are now about to enter upon thrilling events, which demand a new paragraph.

He at once cleared his decks, bore down on his assailant, and gave him a broadside of "Quadratic Means," "Square Roots," and "Equations."‡ These projectiles are certainly very effective upon the reader, even at very long range, but appear to drop harmlessly from the iron-clad hulk of Professor Radicke, who nails his colors to the mast and engages the enemy at close quarters. Victory is yet coy, when a certain—or rather, we should say, a very uncertain—Professor Carl Vierordt,‖ of Tü-

* New Sydenham Society, vol. xl., from Wunderlich's Archiv für Physiologische Heilkunde, vol. ii. Part 2, 1858.
† On the Influence of Bathing in the North Sea. Göttingen, 1855.
‡ A Reply to Professor Radicke's Paper "On the Importance of Arithmetic Means."
‖ Notes on Medical Statistics: Archiv für Physiologische Heilkunde.

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bingen, attracted by the noise and smoke, mysteriously glides on the scene. He manages to draw Radicke's fire partly on himself and partly upon his tender, an unfortunate doctor named Kaupp,* another genial urinary professor, who spends his vacations in making "a series of investigations on the urine in his physiological laboratory," and who "*for eighty-seven days*" lived on "*ham-sausages*," in order to see whether his urine would become briny by this diet. Think of that, gentle reader! three months on "ham-sausages" for no other purpose than to solve the problem whether he could convert his kidneys into lachrymal glands and his urine into tears! Alas, poor Science! poor Science! what have not thy votaries done in thy name! "Ham-sausages"! faugh! Ho, boy! fetch hither a lemon, with bivalves the half-shell upon, and hark'ee, a word in thine ear: forget not a pot of small beer. But we are rambling.

Now, however neutral the salts of the North Sea may be, its waters are evidently not so considered; for a dreadful combat ensued between the above-named professors, in which were used all the offensive and defensive Means known to science, except the Harmonic. Having artfully wrought up the interest of the narrative to white heat, let us pause for a moment to take a calm survey of the situation.

From the time of Bacon the *inductive* method had been used for the interpretation of medical observations. It collected facts, grouped them, analyzed them, and compared them without necessarily summing them up. It appealed to the "*logic* of facts" rather than to their *number*. To borrow the words of Trousseau: "In a word, in opposition to the *numerical* method, it puts as much of its own as it possibly can into its interpretation of facts, well assured that by so doing it will approach more nearly to the truth."†

In the year 1767, according to M. Arago, astronomers first began to apply the *calculus of probabilities* to the solution of certain mysterious perturbations in the solar system, and thus, with the prophetic eye of science, to forecast the orbits of unseen planets. By the *calculus of probabilities*, Newton from a falling apple, and Galileo from an oscillating lamp, worked out great master-laws.

Stimulated by such magnificent discoveries, the French Academy of Sciences, in 1835, warmly but fruitlessly discussed the feasibility of adapting figures, and especially this calculus of probabilities, to therapeutic research. Five years later Jules Gavarret‡ took up the cudgels in favor of the *numerical method*, as it was called, of interpreting medical facts, which took statistics for its basis and sifted them by the calculus of probabilities. His method "recognized the sovereign power of figures," but, involving as it did algebraic equations beyond ordinary habits of thought, would have died with its advocate, had not Parent-Duchâtelet§ taken it in hand and adapted it with great zeal to the study not of pathology nor of therapeutics, but of hygienics. At first blush an appeal to figures and statistics looks fair enough, for figures in the abstract do not lie; but when these figures represent *medical facts* which are not *facts*, of course they are not to be implicitly trusted, even when the logic of the calculus of probabilities is invoked. For if x is to be determined from a, b, and c, or from any other letters of the alphabet which in medical research will always represent uncertain terms, it stands to reason that one may play any number of mathematical tricks on such an equation; he may raise it to the billionth power, or degrade it to the most vulgar and improper fractions, and yet the result x will always be an uncertain quantity. *Nihilo nihil;* from uncertain medical facts no certain truth can be worked out by the most adroit mathematician,—not by La Place,—not even by Sir Isaac Newton, who interpreted several very stubborn apocalyptic prophecies by the calculus of probabilities.

It appears, then, that the unpleasantness which sprang up between Dr. Beneke and Prof. Radicke, and into which several other professors were dragged, hinged upon the question whether the phenomena of tissue-metamorphosis are not better interpreted by the physiological tact of the observer and by the inductive knowledge acquired from carefully-conducted observations, than by the arithmetic means of numerous statistical inquiries, or the calculus of probabilities. In other words,—to put it more neatly,—whether we are to address our remedies for Smith's sore throat according to the pathological condition of his pharynx, to his (Smith's) general hygienic status, and to the character of the prevailing sore-throat epidemic, or whether according to a balance struck between a series of sore-throat statistics, involving numerous percentages of deaths and recoveries, and certain prescriptions long preserved in the Smith family and consecrated to the Smith sore-throat.

The point at issue, the reader will observe, was a solid one, and was solidly met by the combatants, whom we left hammering away at each other, and to whom it is high time to return. Now, as we have a modest shyness of displaying our mathematics, and utterly despair of ever giving even the gist of their arguments without resorting to fluxions and to the mulberry—bah! we mean the differential calculus, we are left no alternative but to describe the whole encounter upon the question of the arithmetic means in such nautical language as a familiar acquaintance with ferry-boats will permit; and we do this the more cheerfully because the average reader (we here allude to each one of our *non*-subscribers) will thereby get a clearer insight into the merits of this difficult question than he could by wading through the work itself.

After playing at long-bowls for some time, the combatants beat to quarters and grimly closed. Kaupp pluckily steered alongside of Radicke and blazed away with his "ham-sausage" analyses, but he was raked fore and aft and silenced in a jiffy by a broadside of double-shotted arithmetic means from Radicke's port

* Investigations on the Dependence of the Amount of Chloride of Sodium in the Urine upon that in the Food.

† Lectures on Clinical Medicine, New Sydenham Society, 1869, vol. ii. p. 33.

‡ Principes généraux de Statistique médicale.

§ De la Prostitution; Notice sur sa Vie, etc., par F. Leuret.

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batteries, who in turn got his best starboard guns dismounted by Beneke's steady fire with the "logic of facts." He also received several percussion retorts just abaft the mizzen-chains, which let in daylight and considerable brine. Under a press of canvas, Vierordt bore down in splendid style to his "young friend" Kaupp's aid, and poured in a withering fire of adjectives and several skylarking calculi of probabilities; but Radicke took the wind out of his sails, and by a well-aimed quadratic unshipped his rudder-pintle, making him steer wildly. Running foul of Kaupp, he carried away his "young friend's" poop-deck, spanker-boom, and ensign-halyards. Of course Kaupp's flag bolted away from the gaff, and it was thought he had struck; but he defiantly ran up a link of sausages at the fore, shook out the reefs in his topsails, and sullenly sailed out of range. Early in the action, Boecker—Sarsaparilla Boecker he was nicknamed in the squadron—squared away and showed a clean pair of heels, for which he ought to have been court-martialled and shot; but that is neither here nor there. Cursing his cowardice, that gallant fellow* Beneke showed his grit, like a true Marburger. Wherever the arithmetic, the geometric, the successive, and the quadratic means flew the thickest, he was *there*, handsomely serving his guns long after his bulwarks were torn into toothpicks. Twice he took fire, and once, with his trusty Wangeroge in one hand and a double-barrelled Oldenburg in the other, he drove back Radicke's boarders, who swarmed on his spar-deck like hornets.

Time—what will not time subdue?—and a lack of ammunition at last put an end to hostilities, the last shot being fired by Radicke as he slowly drifted away from his brave antagonist. Now, after all this blaze, this smoke, this noise, this crashing of spars and riddling of hulls, pray, what was the result? A drawn battle, with no prizes, and no results other than that the combatants mutually hauled off for the nearest port, in a more or less crippled condition, and with much water in their holds. There we will leave them for repairs, eager to resume the fight, as we shall the subject, at an early day.

BEHAVIOR OF MEDICAL STUDENTS.

THE behavior of some of the London medical students appears to be no better than that of their less cultivated brethren in other portions of the world. The last Introductory at Guy's Hospital was the occasion of a most disgraceful outbreak. Screeching, cackling, baaing, yelling, singing of popular songs, etc., contributed to swell the uproar which utterly drowned out the voice of the professor; but these harmless amusements were laudable, compared with the knocking off and demolishing of visitors' hats with walking-sticks, and the showers of spitballs, peas, explosive pellets, etc. which greeted the professors and their friends, especially those whose bald heads offered conspicuous targets. The scene was made more ludicrous by the course of the lecturer, who told his audience that he had his lecture packed up ready for the press, and that they could read it in the papers, and then described his own student-days at the German universities, with their duelling, their beer-parties, and other peculiar rowdyisms.

We do not remember ever to have seen anything like this in our own country. During the intense excitement just before the breaking out of the war, we indeed once saw the lecture-room in an uproar, but it was the uproar of angry civil strife, when every one was on his feet,—when men were already commencing to fight,—when knives were out and the air was full of curses. We well remember how one of the professors rushed among the students in his shirt-sleeves, and, with stentorian voice and wild, imploring gestures, stilled the tempest just in time to prevent bloodshed.

* He was a Fellow of several learned societies.—Ed.

"THE GOLD-HEADED CANE."

UNDER this odd title, the history of the lives and times of five of England's illustrious physicians—Drs. Radcliffe, Mead, Askew, Pitcairn, and Baillie—was given to the world in the year 1828, the authority for its accuracy being nominally a gold-headed cane successively carried by these medical worthies. There are thousands in the profession at the present day endowed with a taste for the nicer walks of literature, who have not degenerated into mere practitioners,—"only this, and nothing more,"—that would be deeply interested in perusing such a book as the one referred to. To these it must be a matter of real regret that so little has been done recently—we may safely say for a quarter of a century past—to increase the general fund of knowledge of medical biography and bibliography, medical history, and professional anecdotes. We are favored, to be sure, occasionally with fragmentary biographical sketches of individuals who have died or become in some way conspicuous, and one or two bibliographical treatises have emanated from the hands of venturesome medical authors or compilers; but the anecdotes of medical men we see recorded are seldom either amusing or worthy of the men of whom they are told. The high-toned medical periodicals of the day are too much absorbed in solid reviews of new works or in striking original essays to indulge in retrospective glances at men and things as they were. It might seem, too, beneath their dignity to descend to anecdotical sketchings, interesting as these might be. Then, again, the demand for practical books is so great that book-publishers hesitate to incur the pecuniary risk of issuing works that will not be sought with avidity by the medical public at large. The consequence is that the great body of the medical profession remains in lamentable ignorance of its own progress and history, and of the social and personal qualities that have illustrated the characters of its own teachers and disciples. Are we doomed to wait for the return of a fashionable gold-headed cane mania for another favorable opportunity to cull the choicest *ana* of medical literature?

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TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held November 23, 1870, at 8 P.M. Dr. Atkinson introduced the subject of puerperal convulsions, he having encountered two formidable cases recently.

November 16, 1870, at 2 A.M., he was called to meet Dr. Stewart in consultation in the case of Mrs. W., aged 21 years, a primipara, in eighth month of pregnancy. The premonitory symptoms were not well marked. She had been unusually active, and was stooping to raise a tub at about 5 P.M., when she fell in a convulsion. Purgation was attempted unsuccessfully by means of calomel and injections; blood was taken freely, yet the convulsions continued. She was delivered about 3 A.M. of two large male children by means of the forceps. Convulsions recurred in about an hour, but in a modified form. Chloral was then exhibited in fifteen-grain doses every two hours. Its effect was marked, after the third dose, by a quiet sleep. On the 18th she became conscious, and appeared about to make a rapid recovery under the use of tonics and stimulants, at the same time taking mass. hydrarg. with quinine and opium. On the 20th she suddenly commenced to sink, and died on the morning of the 21st.

About three months previous he was called to see a case with Dr. Patterson, where the convulsions had continued from 5 A.M. This patient was about 18 years old, a primipara at full time. He saw her at 9 P.M., in a dying condition. Nothing remained but to accomplish the delivery, as the treatment had been all that could be desired. She expired nearly half an hour before the child could be extracted.

In 1857 he had encountered a case, a strong, heavy-built Irishwoman, a primipara at term. Although it was a hot day in July, she had been freely plied with hot whiskey punch. Delivery of twins was accomplished at 5 P.M., after a long and tedious labor from 9 A.M. A powerful convulsion occurred as the placenta was being extracted, which was quickly controlled by the anæsthetic effects of ether. A typhoid condition set in, and she expired on the twelfth day.

Dr. Morris, in the course of some remarks upon obscure abdominal tumors, mentioned a case which occurred recently in the female medical ward at the Episcopal Hospital. A tumor appeared in the left side between the crest of the ilium and the inferior ribs, which was found (the patient being examined under the influence of ether) to be too high for an enlarged ovary, and, from the clearness on percussion above it, and its mobility, was evidently not splenic. It was therefore probably either mesenteric or fecal. After the administration of a castor-oil mixture (ol. ricini f℥ss in f℥vi of mucilage, syrup, and tr. card. comp. with sufficient tr. opii to prevent rapid action and griping—dose, a dessertspoonful every hour), hard, dark masses were passed from the bowels, with diminution of the tumor and great relief to the patient. But these fecal accumulations may occur in any part of the colon, and then be mistaken for scirrhus, or even for aneurism. In another case of a woman recently in the wards of the same institution, there was a tumor 2½ inches in diameter in the right iliac fossa; the patient complained of a constant throbbing pain, and there was tumultuous action of the abdominal aorta, with marked *bruit*. The large vessels of the abdomen are apt to pulsate strongly and give a ringing sound from the presence of a tumor in the abdomen; this is probably owing to reflex irritation of the fibres of the sympathetic distributed to their coats. In this case, tumor, excessive pulsation, and *bruit* all disappeared after the action of the above mixture: about ten days subsequently there was a recurrence of the symptoms, which was promptly relieved in the same manner, and the patient was discharged subsequently, cured. In another case, which had come under his observation a year or two since, there had probably been a fecal accumulation in the sigmoid flexure some months previously to his seeing her, which had disappeared under the use of aloetic purges which produced violent straining. There remained deep-seated pain, and a small tumor a little to the right of and above the umbilicus, which pulsated strongly and gave an aneurismal *bruit*. Dr. Da Costa, who saw the case with Dr. M., agreed in referring it to the aorta or one of the vessels of the cœliac axis, but thought there was arteritis rather than dilatation. She was kept in a recumbent position, with considerable amelioration of her symptoms. Some time after, while she was in the country, obstruction of the bowels again set in. The same mixture was prescribed by letter, with instructions to telegraph if not promptly relieved. In a day or two a telegraph came, *sic:* "Obstructions on grand trunk line removed, and delayed freight forwarded." About ten years ago he had been requested to see a young lady, the daughter of a physician in a neighboring town, who was supposed to be dying of peritonitis. On careful examination, he diagnosed the case as one of typhlitis, due to the presence of feces or some foreign body in the appendix vermiformis,—an opinion which was stoutly opposed by three other physicians present, on the ground that the patient had diarrhœa. However, the castor-oil mixture, and a poultice to the abdomen, were tried, and in two or three days hardened feces, pus, and a cherry-stone came away, and the patient rapidly convalesced.

Dr. Wm. H. Pancoast spoke of the anatomical relations of the solar plexus of the sympathetic, and the fact that its ganglia are the largest in the trunk, and second only in size and importance in the nervous system to the brain. It is really the organic brain of the abdomen. As it controls all the organic functions of the abdomen, any viscus of that region, being seriously disordered, may produce altered functions in other organs of the abdomen, from the disturbance being reflected to the solar plexus, and thence forward to some other part. Owing to the connection of the semilunar ganglia with the thoracic sympathetic through the splanchnic nerves, any undue disturbance of the solar plexus, reflecting this impression to the thoracic ganglia, may so disturb the general sympathetic ganglia as to produce functional disorder of the heart through the cardiac nerves, which connect the cardiac plexus with the sympathetic nervous system. The heart cannot be functionally deranged, as by palpitation, without disturbing the pulmonic circulation; and he believes that he has prevented consumption by attending to this fact, relieving the disturbed sympathetic nervous system, and thus controlling and relieving the undue action of the heart.

Dr. Turnbull spoke of a diphtheritic condition of the bowel. In one case which he had seen, the fecal matter was washed upon a sieve, and true diphtheritic substance was detected, the nature of which was confirmed by microscopic examination. In this case ordinary remedies seemed to fail.

ACADEMY OF NATURAL SCIENCES.

A SEMI-MONTHLY meeting of the Biological and Microscopical Section of the Academy of Natural Sciences was held November 7, 1870, Vice-Director Wm. Pepper in the chair. Present, nine members.

Dr. J. G. Hunt presented the following report in regard to the dust-shower in Vermont, which was accepted, the committee discharged, and the corresponding secretary directed to forward the same to the authorities at the Smithsonian Institution:

"The committee to whom the dust sent by Mr. H. A. Cutting, and said to have fallen from the air in Vermont, February 12, 1870, was referred for examination, make the following report:

"The dust was alkaline in character, as proved by effervescing under the action of an acid.

"On microscopical examination we find as follows:

"1. Much granular amorphous matter.

"2. Many round or oval granules, perfectly transparent. These disappear when treated with nitric acid; it is probable, therefore, that silica forms no part of their composition.

"3. Spores of fungi or gonidia of some lichen.

"4. Diatomes.

"5. Fragments of vegetable cells, too imperfect for identification.

"6. Cells of coniferous wood, of the genus Pinus, having the peculiar deposit characteristic of these cells absent in spots.

"7. Other cells of coniferous wood, with smaller markings than those of the pine; few dots in a row, and two parallel

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rows in each cell, and the cells terminating transversely and not obliquely as in the pine.

"8. Many cells of an Alga resembling red snow, or Protococcus nivalis, or Palmella cruenta, or Porphydium, as the unfortunate plant is now called. These cells were at the stage of binary subdivision well known in that Alga.

"We see no reason to doubt that this dust is the ashes of some burning forest, which has been sifting the higher regions of the atmosphere with its microscopical fingers, gathering in its transit some recognized organisms and many we could not identify. The distance it may have travelled we cannot measure, nor is it important.

"To the action of the winds Linnæus ascribes the 'importation into Europe of the Conyza cœrulea of Canada which now infests the north of France.'

"Certain lichens from the mountains of Asia, taken up by whirlwinds, travel among the clouds, and, imbibing watery vapor upon the journey, grow during their peregrination, until they fall at vast distances from whence they started. 'This rain of plants sometimes forms in those places a layer five or six inches deep. Men feed upon them, and what they cannot consume is given to the cattle.' We have been told by aeronauts that they have seen thistle-seeds floating above the clouds. If these heavier bodies have been carried vast distances, it is not improbable that this fine dust may have followed a devious and far-distant path.

"Your committee would request Mr. Cutting to send to this section a copy of his paper on Dust-Storms when completed.

"All of which is respectfully submitted."

(Signed) DR. J. G. HUNT,
DR. WM. B. CORBIT.

Dr. James Tyson inquired of Dr. Hunt whether the effervescence with acid did not indicate that the dust was composed of carbonates; to which question Dr. Hunt replied in the affirmative.

JOSEPH G. RICHARDSON, *Recorder.*

TRANSLATIONS.

OUGHT CONSUMPTIVES TO MARRY?

IN the widest and only true view of man's nature, the physical and the psychical are always related, and are often inseparable. The highest morality and the most perfect intelligence cannot be dissociated from an equally high and perfect condition of the animal organism. Whatever modifies health must, in a greater or less degree, affect both mind and morals; and, reciprocally, the soul can rarely be disordered without physical deterioration. Other things being equal, a strong race is a virtuous race; and the converse is equally true. Whatever tends to create or to perpetuate physical infirmity tends likewise to the moral deterioration of society, and to the ultimate extinction both of the virtues and the very existence of the race. As nations are organically constituted by families, and these by individuals, so does the physical and moral health of the units determine that of the aggregate. In this view marriage becomes a very solemn responsibility. Our fathers, wiser than their posterity, strove to render this act a deliberate and solemn one by a religious sanction. The conclusions of modern science have justified their laws and corroborated their motives, and more than ever demonstrated the serious accountability of those who, in contracting this tie, assume a grave responsibility not only towards one another, but towards society and the state. It has been demonstrated that the marriage of persons actually diseased, or who inherit morbid predispositions, not only inflicts misery upon themselves and shortens their lives, but also creates a heritage of woe for generations, it may be, of descendants. Insanity, syphilis, scrofula, and tuberculosis are thus voluntarily made agents for corrupting society at its very source. Among these evils, one has recently been discussed by so high an authority that we feel constrained to bring his views to the notice of our readers, in the hope that they may be led to use their influence in staying an evil which arises out of a sheer ignorance or a culpable disregard of the laws of health and disease.—[ED.]

IS IT PROPER FOR CONSUMPTIVES TO MARRY?

BY DR. F. A. HARTSEN.*

THIS is a complex question. Many, considering the hereditary transmission of phthisis, will answer in the negative. Yet it is certain that successful love, by enlivening all the functions, must contribute to cure the sick, while disappointed affection may readily induce a fatal result, and thus bring misery not only upon the party immediately interested, but also upon others. Now, I ask, is it allowable to imperil the lives of several persons on account of children who may or may not be born? There is no law by which the children of consumptives necessarily inherit any pulmonary disease, and, still less, consumption. But, even if the inheritance were inevitable, it should be remembered that death must arrive sooner or later, either by consumption or from some other cause. Now, it cannot be assumed that a consumptive is necessarily less fortunate, less estimable, less talented, or less useful, than other men; and we therefore cannot perceive any reason why his lot should be rendered more unhappy than his neighbor's. If none but valid men should marry, the world would come to a pretty pass. Besides, it is not to be forgotten that the therapeutics of phthisis are improving, and our children will advance them more than we have done. Before the offspring of such marriages become liable to the disease, many a discovery may be made that will render the disease more tolerable and less destructive. Moreover, consumptives escape certain dangers to which strong men are exposed,—death in battle, for instance. It is often assumed that sexual relations are especially exhausting to consumptives, and that they are bound to live a life of total abstinence from carnal indulgence. But this is an exaggeration. Sensible people will enjoy with moderation. Besides, sexual indulgence is less exhausting than certain persons, who have concluded that the grapes are sour, would have us believe. Married people often grow fat, and do not commonly look weak and ailing.

To this plausible argumentation Professor VIRCHOW replies:

Although unused to answer articles published in my *Archives*, I must here make an exception, because the question mooted by Dr. Hartsen demands the most careful judgment, and because even the opponents of truth ought not to be silenced. The answer to the question propounded by him will be diversely answered by a consumptive and by a healthy man. The former, quite independently of the fact that persons of a weak and nervous temperament are prone to sexual pleasures, will reply in the affirmative. He will reason after the fashion of Dr. H., and possibly even go so far as to subordinate the question of marriage and of family to the desire for sexual indulgence. Passion overrides judgment: even a consumptive who is also a physician may not be proof against its delusions. I well remember one of our most accomplished morbid anatomists, who belonged to a tuberculous family, and had, indeed, lost his father and two brothers by consumption. While still a young man he fully resolved never to marry. Nevertheless his time and fate overtook him: he married; and before a year had passed, an acute attack of the disease put an end to his life. As men, let us judge not, lest we be judged; but as physicians, let us not be guided in this matter by consumptives, even although they happen to be physicians. However we may dissuade from sexual indulgence and from marriage, there will be consumptives enough to make light of our judgments. We cannot and we will not proclaim an interdiction, but shall fulfil a moral duty when

* *Virchow's Archives*, Berlin, 1870.

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we raise a warning voice and dissuade from a course of conduct which may become most disastrous to the consumptive, to his family, and to his posterity.

As regards persons of consumptive tendencies, it cannot be doubted that tubercle of the sequal organs of the male (testicles, vas deferens, prostate) most commonly occurs about the age of puberty and during the first years after the commencement of sexual relations, although I have occasionally met with it at an earlier age. On the other hand, I have seen consumptives of continent habits whose marriage became the signal for the development of tubercle of the prostate, etc. A similar fate, though more rarely, overtakes women after their confinement. I have repeatedly seen tuberculous endo-metritis directly developed by the puerperal state; and although this affection is less dangerous than tubercle of the prostate, yet it readily becomes associated with tuberculous peritonitis, and is therefore not to be made light of. I will not now attempt to decide how far blenorrhœal discharges from the sexual organs promote tuberculous development in them, yet I feel it my duty to remark that, according to my experience, a catarrhal affection may occasion the development of tubercle in them, just as pulmonary catarrh may induce it in the lungs.

But the question before us relates not only to tuberculosis of the genital organs, but also and mainly to the influence of sexual indulgence in hastening the course of the pulmonary disease or in provoking its relapse. For a long time the deceptive doctrine was preached that pregnancy and childbed exerted a favorable influence upon the course of phthisis, and even upon the tuberculous predisposition. Grisolle and Dubreuilh, however, demonstrated the contrary; and while I, on the strength of numerous observations, am ready to acknowledge that this rule is happily not without exceptions, yet it must be admitted by every experienced physician that parturition involves great danger to tuberculous females. Let it also be considered that not a few women predisposed to consumption refuse, either from sentiment or from necessity, to deprive their infants of the maternal food, and that suckling is one of the most deleterious influences among those that determine the fatal downward course of phthisis.

Dr. Hartsen appears to have had more regard for wives than for their husbands. The men are emphatically advised to be prudent and moderate. But what chance has reason against the allurements of sense? A young husband has seldom the opportunity to be moderate, for the danger of marriage consists in the very facility of erring. And, in point of fact, nothing is more common than to see young men belonging to consumptive families perish in the first years of their marriage. How numerous are the young widows made by such espousals!

But Dr. Hartsen, it appears to me, estimates too lightly the dangers to which the children of consumptive parents are exposed. He rather suggests the hope that the marriage of such persons may be unfruitful. But no man marries expecting to remain childless. He comforts himself with the reflection that *all* the children of consumptives are not necessarily tuberculous. But in truth there are but few such whose health is not delicate, and who are not in danger at least of leaving to their own children the seeds of the disease, or a predisposition to it. And of these children how large a proportion die of phthisis! However, Dr. H. has at least this faith in the next generation, that it will rapidly advance in its knowledge of curing the disease.

I imagine I have contributed something to inspire this hope, in banishing the ghost of tuberculosis which haunted a goodly number of consumptives, and especially of persons affected with pulmonary phthisis. Many a case of chronic bronchitis, and many of caseous pneumonia, is curable, merely because it is not tuberculous. But it cannot be assumed that all consumptives are tuberculous, and that caseous pneumonia creates no heritable tendency. In my judgment, medicine will never attain to the complete cure of consumption; and therefore it is a sorry consolation to one's self and family to bid them confide in the therapeutics of the future.

Not long ago, and soon after one another, two anxious fathers, in both of whose families consumption had inflicted cruel bereavements, consulted me respecting the proposed marriage of their children. On this, as on other similar occasions, I advised that the young persons should be fully informed of the danger they incurred, and that they should then be allowed to decide the question on their own responsibility. In my opinion, that is the very last limit of concession which a physician ought to yield. In former times lepers were forbidden to marry; but the more humane spirit of our age forbids such constraint. Yet we are as little warranted in advising consumptives to marry, as those who have a hereditary tendency to insanity.

CORRESPONDENCE.

NOTE ON ADIRONDACK MINERAL WATER.

BY JOHN BELL, M.D.

THE experience already obtained should authorize us to give this water place in the Materia Medica as a diuretic and alterative of undoubted therapeutical value. Its curative powers have been realized most conspicuously in disorders of the kidneys and bladder, including calculous deposits and the so generally intractable albuminuria and diabetes. Some of our Philadelphia practitioners—Drs. Agnew, Da Costa, Morton, and Wallace, and myself—have expressed their satisfaction with the diuretic operation of the Adirondack water, and in some instances its action was so powerful as to require a suspension of its use. Dr. Wallace looks on this water as our best diuretic; he gave it with entire success in a case of obstinate subacute rheumatism accompanied with anæmia and great prostration. In one of Dr. Agnew's cases the patient suffered from albuminous and bloody urine, which was also scanty in quantity, ropy, and offensive. Recourse was had to the water, and in thirty-six hours the urine became copious and free from mucus, and two small calculi were discharged. Dr. A. was equally successful with this remedy in a case of rheumatism and in another of nephritic colic with bloody urine. Dr. Morton relates that "in a case of abdominal dropsy, not only was the fluid rapidly carried off, but the diuresis was so excessive that only a small amount of the water was prescribed. The patient has remained well ever since,—now over one year." Dr. M. has also directed the use of the water with good effect "in the bladder-troubles of old men."

The Adirondack Mineral Spring rises in Whitehall, in the State of New York, at the head of Lake Champlain. Its name is derived from its issuing from the base of one of the spurs of the Adirondack Mountains. The temperature of the water is 52° F. Its saline constituents are carbonates of lime, magnesia, soda, and potassa, with traces of manganese and lithia; also sulphate of lime and chloride of sodium. There seems to be a general concurrence of opinion among the physicians of Whitehall in favor of the remedial powers of the water of this spring. Dr. Shumway regards it as stimulant, tonic, and diuretic, and producing, in excessive doses, headache, giddiness, oppression of the stomach, and irritation of the urinary organs. He speaks of its very decided efficacy in chronic rheumatism, and also in all chronic cutaneous eruptions. Two cases of diabetes mellitus are reported by Drs. Long and Bennett, cures of which were brought about by the use of this water. Dr. Long prescribed it in Bright's disease with the happiest results. Instances are related of speedy and permanent relief obtained by drinking it in cases of gravel, of difficult and painful micturition, and even of retention so complete that a catheter had to be introduced. Satisfactory results have been procured by the use of this remedy in atonic dys-

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pepsia and chronic diarrhœa and dysentery. The large proportion of iron—five grains of the carbonate in a gallon—in the Adirondack water would indicate its use in a large number of diseases in which anæmia and general debility prevail. We might be equally hopeful of benefit from the same remedy in nervous disorders,—hysteria, hypochondriasis, and chorea. The ordinary dose of the water is from six to eight ounces, three times a day, to be increased or diminished according to circumstances.

REVIEWS AND BOOK NOTICES.

A Handbook of Medical Microscopy. By J. G. Richardson. Philadelphia, J. B. Lippincott & Co.

This book owes its existence, the author tells us in the preface, to the fact that while the medical profession is daily growing more and more conscious of the practical advantages which result from the use of the microscope, there does not as yet exist any work which satisfactorily considers the subject from this point of view. How far a book of this nature is valuable is a question which our limits will not permit us to discuss. Compends and short cuts to learning are and will be demanded so long as our present system of medical education prevails; and it is by the existence of this want that Dr. Richardson justifies the publication of his text-book. To fulfil this indication, however, requires faculties of no mean order; for the essential elements for success must embrace a well-organized plan in the development of the subject-matter, a clear and concise style, an avoidance of all mooted points of discussion, and, above all, a perfect familiarity with the practical manipulation of the instrument. In reply to the question, How far does this book answer these requirements? we are compelled to say that, so far from restricting himself to the safe but tame development of facts, the author at times most unexpectedly enters upon the discussion of themes which tax to the uttermost the intellect of men who have devoted their lives to the study of these questions: thus, on one page we find the student busy in learning how to color the nuclei of a group of cells lying "southeast of the angular corner" of his slide, while in the next he is deep in the consideration of disputed cell-walls, and is soon to attack the question of the identity of the salivary corpuscle with the white blood cell, Cohnheim's theory of inflammation, and Hallier's speculations on the germ theory of disease. The style is diffuse, the sentences are involved, and the attention is distracted from the questions at issue by numerous digressions. The author assures us that he devotes many hours daily to the use of the microscope: so that we are constrained to regard the errors which he has made in the description of the instrument as mere oversights, which will undoubtedly be corrected in the next edition of the work. Let us, however, leave generalities, and, as the brief limits of a review forbid any extensive discussion, select one chapter for a more critical examination.

The blood is the fluid which first claims the attention of the young microscopist; and, as it is owing to his observations in this field that Dr. Richardson is best known to the profession, it offers, perhaps, the most suitable chapter for discussion. The red blood discs are, according to the author, to be regarded as "membranous bags filled with colored fluid." This view, so at variance with the teachings of all modern histologists, is advanced without an argument to support it, except a reference to "some remarkable specimens" of the dried blood corpuscles of the Menobranchus, "containing one or more crystals upon whose points was propped out the colorless cell-wall." In vain, then, have the laborious researches of Brücke and Stricker been made on the *living* blood-cell, its reaction when exposed to countless reagents minutely investigated, the phenomena observed which followed its exposure to the action of the electric current, the changes in shape after the operation of heat, carefully recorded by Max Schulze,—all these, and other experiments too numerous to mention, which have led these accurate observers to the conviction that a cell-membrane does not exist, have, we repeat, been made in vain, for Dr. Richardson has some "remarkable specimens," and the "busy professional man" must accept without doubt the existence of a cell-membrane. This enveloping membrane is again invoked by the author when considering the white blood corpuscle, utterly ignoring the fact that some of the most brilliant discoveries of the last decade, so fruitful in the annals of histology, are due to a strict adherence to the necessity of demonstrating the presence of a double contour before admitting the existence of a cell-membrane. But why complicate thus needlessly questions already so intricate? Why render so difficult the investigation of such phenomena as the contractility of the white blood corpuscle, its power of passing through the walls of vessels, of taking into itself particles of coloring-matter, fragments of red blood discs, globules of milk, etc.? Because Dr. Richardson has discovered its identity with the so-called salivary corpuscle, which he has previously described as provided with a membranous envelope. This question of identity is too extensive to be discussed here. Suffice it to say that the latest and best observer (Pflügger) denies the existence of *any* morphological elements in the pure saliva, while another recent writer (Frey), admitting their existence in the salivary fluid as taken from the mouth, seeks their origin in the tonsils and glands of the tongue. In speaking of leucocythæmia the author describes enlargement of the spleen or lymphatics as a "complication," and states that the liver is affected in sixty per cent. The word "complication" is certainly calculated to give a wrong idea to the student, the development of leucocythæmia being directly dependent upon and caused by the hyperplastic growth of the tissue of these organs, which gives us the two forms of the disease, viz., the splenic and lymphatic, while the occurrence of lymphoma in the liver (and kidney, the author might have added) is, comparatively speaking, rare, and is to be regarded as a heteroplastic process, secondary in character, and due to infection by the blood or lymph. This brings us to the statement that "If cancer cells are carried by the blood to distant organs, it is so rare that the fact is probably devoid of practical importance." So far from this being true, all the recent writers insist on the necessity of admitting this mode of contagion, and Waldeyer's late work on cancer, extending the well-known views of Thiersch on cancroid growths to the whole class of carcinoma, demands this theory as the postulate of its existence. The definition of adenoid tissue, as quoted from Ranvier, rests altogether upon a misunderstanding of the term, which was first used by Hiss to describe the delicate network of star-shaped connective-tissue cells which supports the lymph corpuscles: hence this tissue cannot be defined "as a network of enormously dilated capillaries containing aggregated white blood corpuscles."

In conclusion, we can but regret that the author of this book had not more carefully and thoroughly worked over the subject-matter before giving it to the world. We have expressed our opinion in regard to its deficiencies somewhat in detail, because we are unwilling that the work should be accepted abroad as a fair exponent of the state of microscopical science in America or in this city. For it is the publication precisely of books of this class which justifies the indifference with which our scientific work is so often received in Europe, and especially in Germany, where, by a careful and rigorous examination of every possible source of error, experimental physiology has celebrated its most brilliant triumphs.

The Pathology and Treatment of Venereal Diseases: including the Results of Recent Investigations upon the Subject. By Freeman J. Bumstead, M.D. Philadelphia, H. C. Lea, 1870, pp. 704.

The position already attained by this work as the best monograph on venereal diseases in the language is ably sustained by its third edition. Good wine needs no bush, nor does Bumstead on Venereal ask for commendation at our hands. We will content ourselves with pointing out some of the more striking differences noticeable between this and the last edition. The size of the volume is increased by sixty-four pages, notwithstanding the author's attempts at compression of some and omission of other portions, especially "when relating to subjects now fully established and no longer controversial."

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The section on treatment of permeable stricture has been almost entirely rewritten. That by caustic is dismissed in a paragraph of condemnation, while that of rupture and urethrotomy is dwelt upon and approved. The filiform bougie is placed at the basis of all attempts to overcome a stricture; the instrument in position serving as a guide to the subsequent insertion of the catheter, urethrotome, or dilator. Professor Gouley's cumbersome term of "external perineal urethrotomy" replaces the more familiar "perineal section," though, we think, with little likelihood of its being generally adopted. Syphilization meets with no favor, the author pronouncing it a treatment not to be recommended. The subject of venereal syphilis, thanks to the labors of Continental observers,—more particularly to Fournier and Lancereaux,—has been so extensively elaborated during the past ten years as to necessitate a complete revision of the section treating of this most interesting and important subject. Nothing is said of the involvement of veins in syphilis. The cases reported by Girdwood (*Lancet*, 1860, i. 619), occurring, as they did, in military practice, where good facilities are afforded for observation, and resting upon three distinct expressions of the secondary form of the disease, appear to us to be worthy of notice.

The work is furnished with many additional wood-cuts, chiefly in illustration of improved patterns of instruments: the catheter scale giving the equivalents of French and English instruments being one of the most important of these.

BOOKS AND PAMPHLETS RECEIVED.

A Statement of the Case of the People *vs.* Elisha B. Fero. By C. H. Porter, M.D., of Albany. (From the *Journal of Psychological Medicine*, April, 1870.) 8vo, pp. 48. New York, Appleton, 1870.

Body and Mind. By Henry Maudsley, M.D. 12mo, pp. 189. London, Macmillan & Co., 1870.

GLEANINGS FROM OUR EXCHANGES.

Microscopic Objects found in Cholera Evacuations.—The *Lancet*, November 26, 1870, gives a summary of the official report of Assistant-Surgeon Lewis, who was specially detailed to visit India, with the object of investigating the hypothesis of Prof. Hallier, of Jena, and others, as to the fungoid origin of cholera, and the theory of the connection existing between cholera and certain conditions of the soil, promulgated by Prof. Pettenkofer, of Munich. It is as follows: That no "cysts" exist in choleraic discharges which are not found under other conditions. That the cysts or "sporangia" of fungi are but very rarely found under any circumstances in alvine discharges. That no special fungus has been developed in cholera stools, the fungus described by Hallier being certainly not confined to such stools. That the still and active conditions of the observed animalcula are not peculiar to this disease, but may be developed in nitrogenous material even outside the body. That the flakes and corpuscles in rice-water stools do not consist of epithelium nor of its débris, but their formation appears to depend upon the effusion of blood-plasma; and that the peculiar bodies of Parkes found therewith correspond very closely in their microscopic and chemical characters, as well as in their manifestations of vitality, to the corpuscles which are known to form in such fluids. These are generally to a greater or less degree associated with blood-cells, even when the presence of such is not suspected, especially as the disease tends towards a fatal termination, when the latter have been frequently seen to replace the former altogether. Finally, that no sufficient evidence exists for considering that vibriones and such-like organisms prevail to a greater extent in the discharges from persons affected with cholera than in the discharges of other persons, diseased or healthy; but Mr. Lewis is unable to prove or disprove whether the vibriones, bacteria, and monads (micrococci) are peculiar in their nature, or whether they are able to give origin to peculiar phenomena in a predisposed person.

Anatomy of Molluscum Fibrosum.—Dr. C. Hilton Fagge (*Medical Times and Gazette*, September 24, 1870) read a paper upon this subject, based on the results of the dissection of portions of the integument of a woman, aged 40, affected with molluscum fibrosum, who died at Guy's Hospital of another disease. Dr. Fagge and his colleague, Mr. H. S. House, made independent examinations of the tumors, and the conclusions arrived at are as follows: 1. That each tumor is originally developed round a hair-follicle, enclosing at the same time the sebaceous glands belonging to the follicle. 2. That the smallest tumors consist of two distinct elements,—a central glandular body, itself surrounding a hair, and a peripheral mass of very fine connective tissue, containing numerous minute oval nuclei. 3. That the glandular body is a sebaceous gland, enlarged by the separation of its sacculi from one another, and perhaps also by the actual multiplication and increase in size of the sacculi themselves. 4. That the peripheral mass of nucleated connective tissue is developed from the two external layers of the dermal coat of the hair-follicle and sebaceous glands. In conclusion, it is maintained that these investigations render the name "molluscum fibrosum" more appropriate than that of "fibroma molluscum" of Virchow and other German writers.

New Test for Chloroform.—A. W. Hoffman (*Monatsbericht der König. Preus. Akademie*, Berlin, Juli, 1870) praises highly a new test for chloroform, stating that it is easy to recognize with certainty that substance when only .0002 per cent. is present in solution. The test depends upon the fact that on warming alcohol a monamine and hydrated soda isonitril is developed. The practical method of performing it consists in adding to the suspected liquid anilin or other primary monamine and an alcoholic solution of sodium hydrate, and warming slightly, when if chloroform be present the peculiar odor of isonitril will immediately betray it.

Calabar Bean in Tetanus.—In the *London Practitioner* for November, Mr. Christopher Heath records a case of death from traumatic tetanus notwithstanding the apparently free use of calabar bean. Unfortunately, there is nothing in the record to show that the preparation used was physiologically active. A similar case is reported in the *Boston Medical and Surgical Journal* of December 15, and is open to the same objection.

Puerperal Eclampsia (Otto Spiegelberg: *Arch. für Gynäkologie*, vol. i.).—The theory of Frerichs, that puerperal eclampsia is caused by the retention of urea in the blood and its subsequent conversion into carbonate of ammonia, is again defended by Spiegelberg. In reply to the concluding sentence of Dohrn's paper on this subject,—viz., "This theory, certainly, does not hold good in all cases, and is questionably correct in any,"—he gives the detailed account of a case which occurred in the clinic at Breslau, where the presence of carbonate of ammonia in the blood was demonstrated by the most rigid chemical analysis by Gscheidlin, and also an excess of urea in this fluid, with its corresponding diminution in the urine. To confute the statement of Oppler (*Virchow's Archives*, vol. xx.) that the introduction of carbonate of ammonia into the veins of animals, while producing convulsions, was not followed by any symptoms of depression (sluggishness, tendency to sleep, coma, etc.), he made, in conjunction with his colleague Heidenhain, the distinguished physiologist, three experiments on dogs, in all of which, after the injection of carbonate of ammonia into the veins, symptoms exactly resembling those of puerperal eclampsia were produced, thus confirming the results obtained by Petroff (*Virchow's Archives*, vol. xxv.).

Physical Examination of the Heart in Children.—Endocarditis (Steffin: *Jahrbuch für Kinderheilkunde*, vol. iii.).—The heart has a more horizontal position in childhood than in adult life, the apex-beat being felt in the fifth intercostal space, in the line of the left nipple, or even one ctm. beyond this point, without any deviation from health. The impulse is often perceptible over the whole limit of percussion dulness, without the existence of any pathological condition or nervous excitement. The veins of the neck become distended and visible even when the impediment to the free circulation of blood in the pulmonic system is inconsiderable, owing to the difficulty with which a compensatory dila-

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tation of the right side of the heart takes place in childhood. A systolic pulsation of the jugular veins, caused by a relative insufficiency of their valves, may occur even when the tricuspidalis is intact; so that this sign, of such positive value in the adult, is of but little importance in the child. Accidental murmurs are very common, and, owing to the compressible character of the thoracic walls, are often produced by too firm pressure with the stethoscope. The heart is dislocated by large pleuritic effusions or pneumothorax, as in the adult; and when the left side is affected the heart is also pushed posteriorly away from the walls of the chest; as the exudation is absorbed, however, or interstitial pneumonia develops, it is drawn towards the affected side.

Steffin has rarely met with pericarditis in children, but endocarditis has occurred in numerous cases, as a primary lesion without articular rheumatism. The disease begins with fever, rapid and more especially powerful action of the heart, and is followed in a few days by increased area of dulness, with the development of cardiac murmurs. The temperature was very high in all the cases, in some reaching 42° C. A minute clinical history of four cases of endocarditis follows, in which the disease lasted several weeks and resulted in valvular lesions. The dilatation, mitral murmur, and accentuation of the second pulmonic sound disappeared entirely in two cases, while in the other two children, after the lapse of several months, these conditions could with difficulty be recognized after a careful physical examination.

THE USE OF THE CEPHALOTRIBE.—In the *Dublin Quarterly Journal*, November, 1870, p. 330, it is stated that Dr. Kidd has three times delivered with perfect safety one woman, the conjugate diameter of whose pelvis was little more than 1¼ inches. Dr. Braxton Hicks has applied it where there was not more space than 1¼ inches; whilst in Dr. Barnes' case the conjugate diameter was only 1½ inches.

At the meeting of the British Medical Association (*British Medical Journal*, October, 1870, p. 358) Dr. Keiller stated that he preferred and had adopted the operation of cephalotripsy in contracted pelvis, "as he had found it to have advantages which craniotomy did not possess." At the same meeting Dr. Beatty "confessed the fact that it (the cephalotribe) was not so dangerous to life as the old practice of smashing up. In fact, the immunity of the patients on whom the cephalotribe was used was very great."

Dr. J. Braxton Hicks states (*ibid.*, October, 1870, p. 425) that, "unless I am much mistaken, the cephalotribe will be in future the principal instrument employed to reduce the size of the fœtal head, not only in the extremely severe cases, but also in the less so." . . . "Also, with regard to its adaptability to actual practice, I can speak very satisfactorily from now a large experience—perhaps greater than that of any other British obstetrician—in the use of the cephalotribe."

HYSTERICAL RETENTION OF URINE.—Mr. J. Waring Curran (*Medical Press and Circular*) finds that this troublesome affection can be relieved by causing the sufferers suddenly to plunge their hands and arms into very cold water.

DURATION OF PREGNANCY.—M. Aubinais (*Medical Gazette*, September, 1870, p. 176; from *Journ. de Méd. et de Chirurg.*) cites the case of two sisters of irreproachable virtue, who on the same day were married to two sailors. At six o'clock the next morning the husbands were ordered away to their ship. On the two hundred and sixty-fourth day after their marriage the two women were brought to bed at almost the same hour and under the same roof. The possibility of fecundation of a virgin by a single act of coition cannot, therefore, be denied, although it is an exceptional fact.

HOLT'S OPERATION FOR STRICTURE OF THE URETHRA.—In a communication to the Medical Society of London, November 14, 1870, Mr. J. D. Hill (*Lancet*, December 10, 1870) gave his experience in the treatment of urethral stricture by rupture. He had submitted one hundred and twenty patients to the operation, of whom two, the subjects of organic disease, died. His conclusions in reference to the procedure are as follows: that the operation is the most satisfactory method of treating any form of organic urethral stricture which is amenable to dilatation, and, with careful attention to preliminaries, there is no more risk in its employment than in ordinary catheterism; that when the latter is followed by bad symptoms, then Holt's operation is contra-indicated.

Its advantages are (1) promptness in dilating the contracted part to the normal calibre of the urethra; (2) immediate relief to the urinary organs; (3) immediate benefit to the patient's health; (4) freedom from chronic urethral discharge, so frequently excited by gradual dilatation; (5) it is attended with scarcely more pain than catheterism, and rarely with hemorrhage; (6) it is seldom followed by signs of inflammation; (7) it is well adapted to relapsing cases; and (8) is accompanied by a low rate of mortality, less, probably, than gradual dilatation.

MISCELLANY.

SPONTANEOUS COMBUSTION.—Another case of this kind is added to the list by Dr. Bertholle, in the *Union Médicale* of February 15, 1870. It was that of a woman of intemperate habits, thirty-seven years of age; the viscera and portions of the limbs were consumed, the clothes and hair escaping. As quoted in the *London Lancet* (we have not seen the original account), it would seem to have been a genuine case, the access of fire from without having been impossible.

THE WOUNDED IN PARIS.—Despite the enthusiastic and self-devoted efforts made for the accommodation and medical treatment of the sick and wounded soldiers in Paris, the supreme interest of the hour—the defence of the city against the Germans—seems to have impaired the efficiency of the preparations. We learn from our contemporaries of the great scarcity of some of the most necessary hospital supplies; of the entire insufficiency in the number of medical attendants in the infirmaries; and, worse than all, of the difficulty and delay at times experienced in securing attendance even upon urgent cases.

SIR WILLIAM LAWRENCE AND CHLOROFORM.—The *London Lancet* tells us that, at a meeting of the Edinburgh Royal Society, Prof. Christison made some remarks on the discovery of chloroform, which illustrate how nearly Sir J. Y. Simpson was anticipated in his introduction of this anæsthetic into practice. In the summer of 1847, a few months only before Simpson's discovery was announced, Lawrence had repeatedly used in practice an anæsthetic which came recommended to him under the name of chloric ether; and while he and his assistant were busily contriving how to concentrate their chloric ether, not recognizing the fact that it consisted merely of chloroform dissolved in rectified spirit, Simpson's discovery came forth and put a stop to their inquiries.

PRACTICAL PHYSIOLOGY.—We notice, with pleasure strongly mixed with envy, the fact that the arrangements are nearly perfected to secure the teaching of Practical Physiology in all the medical schools of London. The *London Lancet* announces, as a special attraction of the volume for the present year, the publication of the course of lectures on this subject to be delivered by Dr. Rutherford at King's College; and a similar announcement is made in the *Medical Times and Gazette* of a course by Drs. Burdon-Sanderson and T. L. Brunton. We heartily congratulate the London schools upon the establishment of these lectureships. The present state of physiological science, the requirements that are necessary to fit the student for original work in this branch, and the great success which has attended such lectures in France and Germany, alike demand their establishment in connection with every medical school. We trust it will not be long before an

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effort is made in this city, and elsewhere in America, to remove this great defect in our system of physiological teaching.

DEATHS FROM SNAKE-POISONING IN INDIA.—Dr. Fayrer has obtained returns from a number of districts in India relative to the frequency of death from snake-bites in that country. The result is truly appalling. It appears that the mortality from this cause over parts of India equal to about half the area of Hindoostan amounts annually to 11,416 cases, made up of 6645 in Bengal, 1995 in the northwest provinces, 755 in the Punjab, 1205 in Oude, 606 in the central provinces, 90 in Central India, and 120 in British Burmah. Dr. Fayrer estimates the entire mortality from snake-poisoning in Hindoostan as 20,000 annually. In order of destructiveness the cobra takes the first place, and the krait, or Bungarus cœruleus, the second.

NATURE OF LIFE.—We clip the following from the Philadelphia *Sunday Dispatch* of the 25th ultimo. Its perusal cannot fail to provoke a "molecular" smile, and to sharpen the "protoplastic" appetite of our readers:

"Professor Poey, of Lycoming county, in this State, has been trying to tell us what 'life' is. According to Poey, 'Life results from a double molecular motion, general and continuous, of composition and of decomposition in relation to the organism and the inorganic medium. The medium is the combination of external agents, physical and chemical, proper to furnish to the organism the principles necessary for its nutrition and the manifestation of the properties of its anatomical elements.'

"Strange! how Error fastens itself in the human mind, and by its rank growth chokes the tender plant of Truth! During all the fourscore years of our existence we have cherished the fond delusion that Life was rather an immorigerous outgrowth of a retiary paradox, which engrafted upon the persiflage a mephitic diapason, causing it to permeate the neurosthenic rhomboid, and so producing isothermally protoplastic vitality. That is what *we* thought Life was. But we see the mistake now, since Poey mentions it! It is hard, though—very, very hard—to see the idols of our youth thus thrown down and broken one after the other. And by a man named Poey, too! It will make our whole Christmas season sad."

A BITTER ENDING.—Recent despatches mention the death, from intense cold, of *nearly all the occupants of fifty-six railway-carriages* filled with wounded Prussians on their way to hospital. The story may be exaggerated, possibly it is altogether false; but it recalls the horrors of the Russian campaigns of the First Napoleon.

ACCIDENT INSURANCES.—A man in Michigan was recently robbed and murdered while on his way home, on foot. He held a policy in an accident insurance company, and his administrator sued to recover upon this. But the court sustained the company in their position that travelling on foot did not come within the expression "by public or private conveyance," used in the policy. We cannot but think this decision a strange one; and it will affect very materially the value of such policies, if it becomes a precedent. Surely they ought to cover all accidents met with while the holder is travelling upon his lawful business, whether on foot, by carriage, by steamer, or by railroad.

BELLUM IN PACE.—It is reported that Dr. Pigache, of St.-Cloud, was recently shot through the head by a *franc-tireur*, while on his way to visit a woman in labor.

AN EXCELLENT CHOICE.—Dr. Isaac Ray, the distinguished author on Insanity, has been lately elected a member of the Board of Guardians of the Poor of Philadelphia, and has been placed upon the committee having supervision of the Insane Department of the Philadelphia Hospital.

ROMAN PRISONS.—A commission has recently been appointed by the Italian government to examine into the state of the prisons and other places of punishment in Rome. One of its members is Dr. David Toscani.

HOSPITAL CHANGES.—Drs. H. B. Hare and Herbert Norris have been elected visiting physicians to the Episcopal Hospital, Philadelphia, to fill the vacancies caused by the resignations of Drs. H. C. Wood and Edward A. Smith. The election of Dr. Norris caused a vacancy in the staff of dispensary physicians to the Hospital, of which he had recently been elected a member, and this has been filled by the election of Dr. Wharton Sinkler.

IS PIROGOFF DEAD?—A year or two ago we had a detailed account of the death of this eminent surgeon, from excitement after an encounter with robbers. But in the *British Medical Journal* for October 29, 1870, we find that,

"According to the St. Petersburg papers, the celebrated Russian surgeon Pirogoff, at the special order of the Czar Alexander, set out for Bâle at the end of September, in order to place himself at the disposal of the National Association for the Aid of the Wounded, for service on the theatre of war in France."

RECENT REMOVALS OF PHYSICIANS.—The following physicians have lately changed their residences:—Dr. H. Allen, from 1135 Spruce Street to 1109 Arch; Dr. David Burpee, from 326 S. 16th Street to 1332 Arch; Dr. I. V. Ingham, from Arch Street above Broad to 1342 Spruce; Dr. Frederick W. Lewis, from 857 N. 16th Street to 336 N. 10th; Dr. E. A. Spooner, from 311 S. 15th Street to 1430 Spruce; Dr. W. S. W. Ruschenberger, from 1932 Chestnut Street to the U. S. Naval Asylum, Gray's Ferry Road.

Dr. D. F. Condie has removed from the city. His address is "Morton Station (Westchester R.R.), Delaware co., Pa."

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending Dec. 24.	Dec. 31.
Diseases of the Brain and Nervous System	41	46
Diseases of the Organs of Circulation and Respiration	101	110
Diseases of the Abdominal Organs	14	20
Zymotic Diseases	22	26
Constitutional Diseases	10	9
Casualties	2	5
Stillborn	19	15
Unclassified	48	48
Unknown	0	1
Adults	136	145
Minors	121	135
Totals	257	280

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 18, 1870, TO JANUARY 3, 1871, INCLUSIVE.

HASSON, A. B., SURGEON.—By S. O. 272, C.S., Headquarters Department of the South, granted leave of absence for *thirty days*.

MCELDERRY, H., ASSISTANT-SURGEON.—By S. O. 162, C.S., Headquarters Department of Texas, relieved from special Quarantine duty and ordered to Fort McIntosh, Texas, for duty as Post-Surgeon.

BENTLEY, E., ASSISTANT-SURGEON.—By S. O. 368, A.G.O., December 20, 1870, leave of absence extended *thirty days*.

DICKSON, JOHN M., ASSISTANT-SURGEON.—By S. O. 121, C.S., Headquarters Military Division of the Missouri, leave of absence extended *thirty days*.

O'REILLY, R. M., ASSISTANT-SURGEON.—By S. O. 385, A.G.O., December 31, 1870, relieved from duty in the Department of California, and to report to the Commanding General Department of the Platte for assignment to duty.

STORROW, S. A., ASSISTANT-SURGEON.—By S. O. 268, C.S., Headquarters Department of the South, granted *thirty days'* leave of absence.

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WEDNESDAY, FEBRUARY 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE USE OF GALLIC AND TANNIC ACID IN ALBUMINURIA WITH HYPERSECRETION, AND OF BELLADONNA IN CHRONIC TUBULAR NEPHRITIS.

BY H. C. WOOD, JR., M.D.,
One of the Physicians to the Philadelphia Hospital.

J. M., æt. 40, white, of sanguine temperament, English. Has been mostly temperate. Had chancre some nine years since, but with no secondary manifestations at all, until two years ago, when, after a spell of hard drinking, he had ulcers on his legs. He never had malarial disease. Previous to September, 1869, had been living as an overseer on plantations in swampy malarial districts of Georgia and Virginia. He was in wretched health from this period to Christmas, 1869, when he took to bed. He passed during this time an abnormal quantity of water. About Christmas he had severe diarrhœa. He was in bed, much swollen about legs and face, with excessive thirst, and passing large quantities of urine. About the middle of January, 1870, he went to New Orleans Hospital, where he was exceedingly dropsical from head to foot, with a hard swelling in the hepatic region. He finally recovered sufficiently to come North, but was all the time troubled off and on with diarrhœa, and continuously with excessive urination. On the 18th of August he was forced to enter the Philadelphia Hospital, by a recurrence of dropsy. His condition at the present time (September 16) is as follows: The countenance is very pale. There is very marked general œdema, with, however, no distinct ascites. The liver is exceedingly enlarged, reaching nearly to the pelvis; its surface is smooth and hard, with a thick rounded edge. He has no fever at any time. The urine is passed in large quantities, and is highly albuminous. No tube-casts can be found in it.

The condition from which the patient is suffering is probably albuminoid disease of liver and kidneys.

The points upon which the diagnosis rests are the conjoint affection of the two organs, the simple enlargement of the liver, with a smooth, firm surface and thick edge, the absence of any hepatic symptoms, such as jaundice, ascites, or tenderness, and the large amount of urine passed, with the universal dropsy which has been present. The only circumstance which throws any doubt on the diagnosis is the absence of any previous suppurative discharge or other dyscrasia, unless indeed the man has really had constitutional syphilis, which, however, is somewhat uncertain.

After having thus made out our diagnosis, the next point claiming attention is the treatment. In approaching this we should be as systematic and as logical as in investigating the pathology of the case, questioning ourselves, not what are the drugs to be used, but what are the objects to be sought after. In this instance we have a progressive, destructive metamorphosis of tissue to deal with,—one which, if it pursue its course, will of necessity eventuate in the death of the subject. The first and prime indication for treatment is evidently, then, to arrest, if possible, such tissue-changes, and to restore structures already diseased. Have we in our power any means of effecting the latter? No! The mischief done is irreparable. Have we even any known drugs or hygienic measures that will prevent further deterioration? I think not in a case like this. Where the disorder is produced and kept up by a purulent discharge, amputation, or any other surgical arrest of the discharge, will afford room for hope. But there is no such indication here.

If the underlying dyscrasia be syphilis, I think the iodide of potassium, alone, or in conjunction with small doses of the bichloride of mercury, ought to be given; and in the present instance a trial shall be made of the former of these drugs, although I have but little hope of good accruing.

Dr. Dickinson, following out his chemical theory that albuminoid degeneration depends upon a loss of alkalies by the blood, conceived that the steady use of alkalies was strongly indicated, and that they ought to relieve or cure the disease. Unfortunately, clinical experience has not fulfilled his hopes. The alkalies have not been found of any marked benefit, and the watery anæmic blood, so evident in the patient's countenance, has discouraged a trial in the present instance.

The next indication of the case is to build up, as far as may be, the patient's strength. For this purpose, appropriate measures are the use of the best and most nutritious food, small doses of the bitter tonics, and iron, if it can be borne. There has been some cause for suspicion that the iron given to our patient, so far from checking the diarrhœa, has acted as an irritant to the weakened and doubtless diseased mucous membrane of the alimentary canal. It shall, however, be cautiously continued for the present.

Have we now arrived at the end of our treatment? No; there is evidently still another indication. It is to check exhausting discharges,—most evidently, first of all, diarrhœa; and for this purpose we have so far relied chiefly on opium.

There is, however, in our patient another steady drain, one more to be feared than the diarrhœa,—the loss of albumen through the kidneys. Can we do anything to check this? The class of drugs best fitted to do this are evidently the astringents. Of these shall we choose a vegetable or a mineral? Evidently not the latter; for the only one of the class which would be at all suitable is lead, and it is by no means certain that it would be effective. Moreover, the action, to do good, must be long sustained, and to do this with a saturnine salt would be to graft a new dyscrasia upon a system already broken down; a dyscrasia, too, one of whose accompaniments is albuminuria and degeneration of the kidneys. Our choice therefore must be made from the vegetable astringents; and tannic acid, the general active principle of these, immediately presents itself. There are, however, certain strong chemical objections to its use. Tannic acid coagulates albuminous compounds with the utmost activity. When taken into the stomach, its first action on the villi of the alimentary canal must be not merely by virtue of its exceedingly powerful vital action to constringe their vessels and thus interfere with absorption, but also to cover the tissue with an almost impenetrable coat of coagulated albumen. Moreover, suppose tannic acid in any quantity found entrance into the blood, it would seem as though it must of very necessity coagulate that fluid. There are, then, three most excellent theoretical reasons why tannic acid should not be freely absorbed. Are they justified by clinical facts? It is well known that tannic acid is an antidote of value in tartar-emetic poisoning. As it has no chemical action on the double salt, and is in no way its physiological antagonist, it can act only by interfering with its absorption; and here, I think, is a clinical corroboration of the *a priori* argument.

There is an officinal drug very similar to tannic acid, although feebler in its physiological action, which does not precipitate gelatin. It is gallic acid. Evidently the objections to the use of tannin do not apply to this. Its slight local action has but little influence on the intestinal capillaries, nor does it affect the albuminous fluids.

Here, then, is the drug we have been looking for.

Tannic acid is, however, so strongly recommended by some writers as a general astringent that I have been tempted in this case to make a comparative study

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of it and gallic acid. When the patient first came under my care, he was left without treatment, and the urine carefully measured, as follows, from day to day:

Date.	Urine passed, in cubic centimetres.
Aug. 21	2300
" 22	2750
" 23	3000
" 24	3250
" 25	3000

All this time the urine was densely albuminous, becoming almost solid on the application of heat and nitric acid.

On the 26th of August, the use of the gallic acid was commenced. The following table shows the progress of the case up to the present time:

Date.	Amount of urine, in cubic centimetres.	Treatment.	Remarks.
Aug. 26	2900	Gallic acid, gr. xv, t. d.	Urine measured each day at 1 P.M., and record is for previous 24 hours. Changes in medicine made in afternoon of date.
" 27	2500	" "	
" 28	3800	Quinine.	Took quinia for a chill.
" 29	2000	Gallic acid, gr. xv, t. d.	
" 30	2750	" "	
" 31	3150	" "	
Sept. 1	2150	" "	
" 2	1500	" "	
" 3	1750	" "	Urine forms a dense, dark-greenish precipitate with dilute Monsel's salt. Only enough albumen to make a slight opacity with nitric acid.
" 4	1750	" "	
" 5	1850	Tannic acid, gr. xv, t. d.	
" 6	1250		
" 7	1750	Opium as required.	Serous diarrhœa.
" 8	1500		Urine highly albuminous; with liq. ferri subsulph., heavy precipitate of a dirty gray color, some shades darker than pure albuminous precipitate, but not at all greenish.
" 9	1000		
" 10	1750		Diarrhœa better; still takes some opium.
" 11	1000	Tannic acid, gr. xv, t. d.; stopped. Gallic acid, gr. xv, t. d., recommenced again.	
" 12	1000		
" 13	1400		
" 14	2250		
" 15	2000		Urine free from albumen; makes a very dark greenish-black—almost blackish—precipitate with dilute Monsel's solution.
" 16	1000		

This table certainly shows a remarkable diminution in the daily amount of urine passed, and an almost total cessation in the escape of albumen from the kidneys, as the result of large doses of gallic acid,—45 grs. daily,—accompanied by the free escape of the acid with the urine.

When tannic acid was substituted, the albumen rapidly reappeared, and the proper tests failed to indicate distinctly the presence of either tannic or gallic acid. The explication of the fact that the amount of urine did not increase during this period is probably to be found in the presence of profuse serous diarrhœa, which constantly recurred, and was possibly due to the irritating influence of the large doses of tannic acid. It is well to state that whilst this treatment has been carried on the man has improved much as regards the dropsy, and a little as regards the strength.

In connection with the above case I desire to bring before you the results obtained from the use of belladonna by a man afflicted with chronic tubal nephritis.

Circumstances have prevented the case being studied as deeply as it should have been; but the following table shows that, so far as amount of urine is concerned, there has been actually slight diminution, instead of increase, during the period when belladonna was exhibited. Thus, the average of the nine days without treatment is 1800 cubic centimetres; of the sixteen days during which belladonna was exhibited mostly to the point of producing slight toxic effects, only 1769 cubic centimetres.

Date.	Urine.	Treatment.	Remarks.
Aug. 23	1750	None.	Urine is measured each day at one o'clock, and record is for the 24 hours previous. Treatment changed at one o'clock.
" 24	1750	"	
" 25	2000	"	
" 26	2000	"	
" 27	2150	"	
" 28	1650	"	
" 29	1650	"	
" 30	1750	"	
" 31	1500	Ext. bellad., gr. 1/6, t. d.	
Sept. 1	1650	" "	
" 2	1850	Ext. bellad., gr. 1/3, t. d.	
" 3	1750	" "	
" 4	2150	Ext. bellad., gr. 1/6, twice daily, and gr. 1/3 at night.	Mouth and tongue so dry that it became necessary to reduce belladonna.
" 5	2100	" " "	
" 6	1850		
" 7	2000		
" 8	1500	Got no belladonna, on account of sick stomach, one day.	
" 9	1500		
" 10	2250		
" 11	1250		
" 12	1500		
" 13	1750		
" 14	1750		
" 15	1500		
" 16	1250		

ORIGINAL COMMUNICATIONS.

CASE OF SYPHILITIC VACCINIA.

BY JOHN W. LODGE, M.D.,
Formerly one of the Surgeons of the Philadelphia Hospital.

IN August, 1868, Mr. C. requested me to visit his daughter, aged about four years. The child had been perfectly well until she was vaccinated, at the age of a little less than three years. The father stated that previous to that time she was a notably healthy and robust child,—"the healthiest he had." The vaccination did badly from the beginning; an unhealthy form of inflammation resulted, accompanied by much swelling and discoloration. The neighboring lymphatic glands were abnormally involved, being much inflamed, enlarged, and indurated.

The constitutional symptoms also were much more widely spread and serious than those which characterize vaccinia; the vital forces were much depressed, producing a condition resembling typhoid, the result, apparently, of the introduction into the blood of some poison, either in conjunction or combined with the vaccine virus. After several weeks, these symptoms partially disappeared, and the child seemed to have nearly recovered, excepting that at and around the spot where the virus was inserted the parts remained inflamed and unduly sensitive.

It was impossible to decide from the account given by the parents what kind of a sore had been produced by the virus,—whether a vesicle or not; or, if a vesicle, whether it had passed through the regular stages of maturation and decline, or if any of the characteristic local signs of vaccinia were present.

Soon after the inflammation and swelling of the arm had subsided, and the general health had been partially regained, symmetrical sores appeared upon the knees, which, beginning as small pimples, afterwards assumed the appearance of pustules or small abscesses, and were finally transformed into ulcers several inches in extent, of a serpiginous character, and surrounded by others of smaller size. The general health at this time was comparatively good, but certainly not so vigorous as before the vaccination; the child remained very fretful, and had lost much of its natural buoyancy. The ulcers discharged very little, being inflamed and dryish, and healed very slowly; after some weeks they closed, leaving a reddish-colored, smooth, and badly-developed cicatrix. During the summer after the vaccination, and soon after the ulcers had healed,

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the child had an obstinate attack of diarrhœa, the stools being extremely fetid and mixed with imperfectly-digested food. The attack resisted treatment, and continued until cold weather, when it ceased spontaneously. About this time the mother noticed that there were about the finger, wrist, and knee-joints many little, very hard nodules or prominences, and, at several places upon the skin, an eruption, attended with itching and burning. It was also noticed that the movements of several of the joints, especially the wrists and ankles, were impeded.

The above imperfect history is what was elicited from the parents and friends; there are several points, regarding dates and the progress of the case so far, upon which I could unfortunately get no information.

When first called to the case, about fourteen months after the vaccination, I examined the parents with special reference to the probability of their having been the subjects of constitutional syphilis, but discovered nothing rendering it likely that any disease had been transmitted by them to the child. They were both perfectly healthy, neither of them ever having had gout, rheumatism, nor, so far as I could determine, syphilis. Upon neither side was there any predisposition to scrofulous or tubercular disease. The father, a middle-aged man, had a clear skin, smooth bones, and perfect use of all his joints. The other children, two in number, were robust and healthy, never having had any skin affection: one of these children was older and the other younger than the patient. At this time the child was of fair development and growth, and had a good appetite,—with great desire for acids,—good digestion, and regular bowels. The circulatory and respiratory organs, so far as could be ascertained, were unimpaired, although the circulation through the capillaries was very feeble, the lips white, and the skin devoid of its natural suppleness and rosy color; the eyes very brilliant, the lips full. These symptoms, together with some enlargement of the lymphatic glands of the neck, produced the appearance of a child tainted with scrofulous diathesis.

From about three inches above the knee to within two or three of the ankle, on both legs, and almost exactly symmetrical in configuration and extent, there existed patches of chronic eczema, attended occasionally with itching and burning; at other times they seemed to grow paler, and occasioned very little uneasiness. The eruption was surrounded by the copper- or reddish-brown-colored base so characteristic of syphilides, but otherwise had the appearance of ordinary eczema.

The most interesting phenomena of the case were the numerous small exostoses upon the bones near many of the joints. These growths were of various sizes, generally about as large as a split pea, many much smaller, and some rather larger and more prominent. They were very hard,—quite as unyielding as the bone to which they were attached. The bones of the great toe, the ankle, the knee, the finger, and the wrist, were most affected. Surrounding the knuckles, six, seven, and, upon one, as many as nine, of the smaller prominences could readily be seen and felt, some immediately over the joints, and others upon the continuity of the two bones. Corresponding with the eruption in symmetry, the tumors of one side were almost exactly reproduced upon the other. Upon the spinous processes of the cervical and dorsal vertebræ these growths were also found, and it is probable they existed upon the deep-seated and inaccessible bones. There was a marked difference in appearance between these joints and the joints of persons who are or have been the subjects of gout or rheumatism. In those diseases the matter is widely and irregularly diffused, being deposited not only upon the bones, but in the joints, in the fasciæ, and in the cells of the areolar tissue. In this case the tumors were all well defined and regular in outline, and, being very small, they produced little deformity. The mobility of nearly all the joints was affected, the ankles suffering by far the most impairment, rendering locomotion difficult and painful. The child moved slowly, with a peculiar, stiff, unsteady gait.

My observation of the case extended over a period of rather more than three months. At the end of that time very little change had occurred in the local symptoms, but the eruption had to some slight extent disappeared, leaving the skin upon which it had existed of a reddish color, stiff and dry. The concretions upon the bones neither increased nor diminished in size or number, but, as the child had gained some flesh, they appeared not quite so prominent.

Very strongly under the impression that it was a case of hereditary syphilis, a very careful investigation was made to determine that point; but all the evidence seemed proof against that view of the origin of the disease. The personal history of the parents, the entire absence of any sign upon either that they had ever been the subject of syphilitic disease, made that very plausible source doubtful.

The case, undoubtedly, was of syphilitic origin. Exostosis is an extremely rare disease before puberty, except when associated with syphilis. The appearance and symmetry of the eruption, and the general aspect of the patient, strongly indicated—indeed, rendered it certain—that there was a syphilitic element in the case.

If it be possible that the parents never were affected with venereal disease, it follows that the child was inoculated with syphilis at the time of the vaccination, either by syphilitic blood or by depraved virus itself.

The relation of scrofula and tubercle to each other, of syphilis to both, and of vaccination to all three, may be a very intricate subject, and, possibly, not a very attractive one, but is surely worthy of very serious study.

ON THE THERAPEUTIC ACTION OF THE SULPHITES IN MALARIAL DISEASE.

BY JAMES TYSON, M.D.,

Professor of Physiology and Microscopic Anatomy in the Pennsylvania College of Dental Surgery, and Clinical Lecturer on Microscopy and Urinary Chemistry in the University of Pennsylvania.

AS the fungous origin of malarial disease became less probable, the plausibility of its treatment by the sulphites also lost all rational foundation, since it was based upon the discovery of Polli that these salts are hostile to animal and vegetable fungi. But since clinical results have been quoted in confirmation of the propriety of this theory, it is necessary also that additional experience should accord in its results with what we would expect on the supposition that the theory is erroneous; else must there be a certain amount of evidence in its favor. Accordingly, we have thought proper to report the results of a limited hospital experience, as shown by four illustrative cases.

First, however, let us learn some of the results of others. Dr. T. L. Leavitt, of Germantown, Pa., reports in the *American Journal of the Medical Sciences* for April, 1866, p. 388, a single case of remittent fever in a lady, aged 19, which resisted for more than four weeks the sulphate of quinia. The use of fifteen grains of the hyposulphite of soda every three hours, instituted in the afternoon, was followed on the next morning by "the first omission in the exacerbation for over four weeks." The sulphite was continued three days, then at longer intervals, and, as stated by the reporter, "effected a perfect cure."

Dr. S. E. Hampton states in the *Cincinnati Lancet and Observer*, November, 1867, that in sixty-six cases of malarial disease it failed in one only. A few of these cases only are reported.

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Dr. W. E. Turner, in the *Leavenworth Medical Herald*, November, 1867, says that he used the sulphite and hyposulphite in over one hundred and twenty-five cases with unvarying success, and with better after-results than followed the use of quinia.

Dr. C. H. Chubb, of Cambridge, Md., reports, in the *American Journal of the Medical Sciences* for April, 1868, that in twenty-seven cases in which he used the hyposulphite of soda, "the paroxysms were arrested in twenty-five; in eleven of these the arrest was immediate, no paroxysm occurring after the treatment was instituted. These cases were nearly all of the tertian type. In nine cases, one paroxysm, and in the remaining five, two or more paroxysms, occurred after the use of the remedy commenced. These cases were mostly quotidians or double tertians, and the recurring paroxysms were invariably of mitigated severity. In no case was the remedy continued longer than a week, unless there was manifest improvement. In five of the cases relapses occurred; in three of these the disease was again arrested by the same remedy, and did not return, the treatment having been continued some time after the arrest of the chills; in the other two of the relapsing cases, sulphate of quinia was resorted to, to complete the cure."

Two cases only are reported in full,—one of success, another of failure. The former was that of a female, aged 31, who had been the victim of ague for twelve months, during which there was never an interval of more than two weeks between paroxysms. Quinia, iron, etc. were freely administered. "She took the hyposulphite in doses of fifteen grains every two hours, and had but one paroxysm after the treatment was instituted."

To these we append the results of our own experience:

Case I. TERTIAN INTERMITTENT.—J. D., æt. 48, of Ireland, was admitted to the medical wards of the Philadelphia Hospital, October 10, 1870. Had no chill previous to admission. At noon on the 12th of October had a well-marked paroxysm of chill, fever, and sweat. On the 13th was ordered ʒi of sulphite of soda, to be taken in the twenty-four hours terminating at noon of the 14th. At this time, however, the paroxysm recurred with less severity. Two drachms a day were then administered, in divided doses. On the 16th a paroxysm recurred, but less severely. The same treatment was continued until October 27, when the patient was discharged, *no chill recurring after that on the 16th.*

Case II. QUOTIDIAN INTERMITTENT.—Ellen F., æt. 30, of Ireland, domestic, was admitted October 11, 1870. Has been residing during the past five weeks at Red Bank on the Delaware River, where chills and fever are prevalent.

On October 7, about 4 P.M., had a slight chill, followed by fever and profuse sweating. A similar paroxysm recurred daily to date of admission. On October 12 ordered gr. x sulphite of soda every three hours. The paroxysm recurred at 6 P.M. of October 13. Treatment continued until October 15, paroxysm recurring each day with increasing severity, until we feared to continue the sulphites longer. Accordingly, on the 15th, ordered gr. v quin. sulph. every three hours. *After which no paroxysm recurred.* She was discharged October 21, 1870.

Case III. TERTIAN INTERMITTENT.—Hugh K., æt. 13, in summer drives a canal-boat on the Juniata Canal. Admitted to the medical wards of Philadelphia Hospital, October 12, 1870. About October 1, was seized with a chill, followed by fever and perspiration, to which succeeded a similar paroxysm on alternate days, but not at precisely the same hour. The first paroxysm in the hospital occurred October 13. A half-drachm sulphite of soda was ordered to be taken daily. Paroxysm recurring on the 15th, ʒij sulphite of soda were ordered daily. On October 17 paroxysm returned; also on October 19,—earlier and less severe. On October 21, paroxysm did not recur, but at midnight on the 23d again presented itself, though less decidedly; again, similarly on the 25th; on the 26th, at 3 P.M., in very severe form; and at 1 P.M. of the 28th. During this time ʒij of sulphite of soda were taken daily. On the 29th, sulphate of cinchonia, gr. xij, was ordered to be taken by 9 A.M. of the 30th. Paroxysm returned at 10.15 A.M. On November 1 the cinchoniæ sulph. was similarly administered. No paroxysm recurred upon that day, nor upon the 3d, but one again presented itself upon the 5th, the remedy having been inadvertently omitted after the 1st. On November 7, another paroxysm. Two drachms of sulphite of soda daily were now again ordered, which were increased to ʒss on the 10th. During this interval the paroxysms continued to recur with severity on alternate days. On the 11th the sulphate of cinchonia was again ordered, in so small a dose as gr. ij three times a day. A slight fever presented itself at 10 P.M. of the 12th, but no chill; and after this no paroxysm recurred, the cinchona salt being continued daily.

Case IV. TERTIAN INTERMITTENT.—Isabella W., æt. 29, was admitted October 24, 1870, having the history of a well-marked paroxysm on alternate days for some time previously. The first in the hospital occurred on the 25th. On October 27, ʒij of sodæ sulphis were ordered, the paroxysm occurring at 1.30 P.M. The quantity was increased to ʒiij on the 29th, which was again reduced to ʒij on the 31st. After October 27 no paroxysm presented, though on each day, at the time of the expected chill, a feeling of nausea occurred, and continued even at the date of the patient's discharge on November 7, the ʒij of sulphites being continued to that time.

Now, what are the conclusions we dare draw from the above cases, bearing in mind that the almost invariable tendency of malarial disease, except in its *pernicious* form, is to abatement in the severity of recurring paroxysms, and in some instances, at least, to spontaneous recovery? Let us consider Case I.,—one of recovery under the use of the sulphites. Three paroxysms succeeded each other, the second after one drachm of sulphite of soda had been administered, the third after the use of two drachms; and this was less severe than the previous ones, and was also the last, the sulphites being continued ten days longer. Although some observers might be inclined to class this among the cases which owe their recovery to the sulphites, we ourselves feel compelled to place it on neutral ground, from the fact that the course pursued by the disease was precisely that of the natural history of mild cases,—gradual abatement and final disappearance of the paroxysm. Although it is *possible*, therefore, that the disease was influenced by the treatment, yet the chances are at least equal that spontaneous recovery took place. The case cannot, therefore, be admitted in evidence. Even the most credulous must, however, admit that the response to treatment in this case did not at all compare to that of the sulphate of quinia in similar cases.

How is it with Case II., in which we have the more uncommon condition of increasing severity in the paroxysms? Here clearly the case is against the sulphites. The remedy was useless, at least in the quantity given; and that the case was not an unusual one appears from its prompt amenability to quinine.

Case III. must also be counted against the efficacy of the sulphites; and here no objection can be made to the quantity administered. It reached ʒss per day, while ʒij, which were given many days in succession, must be acknowledged to be a full dose for a boy thirteen years old. It will be noted that there was here a relapse, after the interruption of the paroxysm, during the administration of the sulphate of cinchonia, and that the use of the sulphite of soda was again instituted, but to no purpose. The cinchona was again called to rescue the patient.

In Case IV., a well-marked tertian, the paroxysms disappeared under the use of the sulphites in quantities of ʒij a day; and the suddenness with which they ceased, after a full dose of the salt, when no tendency to diminished severity had previously presented itself, is at least striking. And although it is not impossible that such cessation should occur spontaneously, yet the

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probabilities are against it; and it must be admitted that if quinine had been administered it would generally be conceded that the subsequent effect was a consequent one. We must therefore accept this case as one in evidence of the efficacy of the sulphites.

These results do not accord with those previously reported. Only one out of four could be legitimately conceded to confirm the efficiency of the sulphites in malarial disease, instead of sixty-five out of sixty-six, as in the report of Dr. Hampton, or twenty-five out of twenty-seven, as in that of Dr. Chubb. We do not wish to be considered as questioning the observations of these gentlemen, and have no doubt but that the results followed the treatment; but had these cases been closely watched, analyzed, and eliminated, as only can be done under hospital surveillance, perhaps all would not have been admitted in strict testimony as to the efficiency of a treatment which, in the face of recent minute investigations, can no longer be said to have a rational foundation.

We have not, however, any right, nor do we wish, to exclude any of these cases. We simply present our own as a nucleus *tending* to prove a somewhat different conclusion, to which others may or may not be added.

The attention of others is accordingly invited to a subject which is so full of interest, both in a practical point of view, and as bearing upon a theory of disease which, although tottering, is perhaps not without something to support it, and, therefore, since not definitely settled, calling upon all of us for such information as our humble facilities may afford.

CASE OF CYSTIC DISTENTION

OF THE PANCREATIC DUCT, IN WHICH DEATH OCCURRED FROM HEMORRHAGE.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania.

JOHN HONAN, æt. 45, first came under observation in the early part of July, 1870.

His occupation was that of a house-carpenter, and he had formerly been possessed of considerable property, but his habits were so very intemperate that he had squandered it all. He had been for years addicted to drunkenness, but, despite this, his health had remained fair until early in 1870, when, during a debauch, he suffered a fracture of one tibia. He was treated for this in the Pennsylvania Hospital, and while there he for the first time observed that he passed blood by stool. The amount was not large, and the hemorrhage seems to have been attributed to hemorrhoids, though none could be discovered. From this time until he came under my care he had quite frequent hemorrhage from the bowels. The blood was usually partly clotted, dark red, and occasionally was in large amount. He suffered no pain, but merely complained of increasing weakness.

When first seen, he was excessively anæmic, the mucous membranes even being blanched. There was no appearance of any special cachexia. The heart and lungs were healthy; the pulse was rather feeble, small, and frequent, owing to the large losses of blood. The tongue was pale, moist, and clean; the appetite and digestion were fair. No vomiting or nausea was complained of. There was no tenderness over the stomach, nor any tumor detectable in the epigastric region. The bowels were habitually costive; the stools normal, save during or soon after an attack of hemorrhage. The spleen was of normal size. The area of hepatic dulness was diminished to a slight degree. No free fat was ever noticeable in the stools, nor had he any aversion to fatty food. The urinary secretion was free and normal. No hemorrhoids could be discovered, nor any ulceration or tumor of the rectum. There were no symptoms of aneurism of the abdominal aorta.

Within a week from my first visit (July 22) he was suddenly seized, without apparent cause, with profuse hæmatemesis, soon followed by melæna. The vomiting was apparently checked by large doses of aromatic sulphuric acid, and this remedy, together with an astringent salt of iron, was continued for some time afterwards. He was much prostrated by this hemorrhage, which certainly amounted to a pint. The stools continued to contain altered blood for about two days, and during this time were very offensive and passed with much flatus. Perfect rest was enjoined, stimulus, beef-tea, and milk were given in frequent and small doses, and he slowly regained strength, though still remaining remarkably anæmic.

In about two weeks a second and even more profuse hemorrhage from the stomach and bowels occurred, by which he was prostrated to a dangerous degree. Under the same treatment he again, though more slowly, reacted.

On the morning of August 23, just one month after the first attack of hæmatemesis, I was called to see him in urgent haste, but, on reaching the house, found that he had died just as the messenger returned. He had awakened from normal sleep about an hour previously, and soon complained of uneasiness in epigastrium; this uneasiness increased, and before long amounted to an intolerable sense of oppression, distention, and weight, with extreme faintness. He felt impelled to go to stool, and rose from bed for that purpose, but, before he reached the chamber-vessel, fell to the floor, and very soon expired.

A post-mortem examination was made nine hours after death. The lungs were healthy, but very anæmic. The heart was firmly contracted and perfectly healthy. The liver was slightly contracted, and presented distinct evidences of cirrhosis. The spleen and kidneys were normal. The stomach was greatly distended, and, on being opened, was found filled with an enormous clot of blood, which formed a complete mould of its cavity. The mucous membrane was discolored, but quite healthy. The clot extended through the pyloric orifice, which was widely distended and completely relaxed, into the duodenum. On laying open this part of the intestines, an opening half an inch in diameter, with smooth, non-elevated edges, was observed near the point of entrance of the common bile-duct. A thin coagulum hung through this perforation into the bowel. On passing a probe through the opening, it was found to enter a cavity in the head of the pancreas, which was enlarged and closely adherent to the duodenum.

The following minute description of the changes in the pancreas is copied from the report of the Committee on Morbid Growths of the Pathological Society,* to which body the specimen was exhibited:

"The head of the gland, which is enlarged and hardened, presents in its interior a cavity about the size of a large walnut, which communicates with the duodenum by an ovoid orifice at least half an inch in diameter. The walls of the sac are trabeculated, but everywhere covered by a smooth mucous membrane, such as we often see in retention-cysts. There is but little of the proper gland-tissue to be seen in this part of the organ, its place having been apparently usurped by dense fibrous tissue. The same state of affairs is also observable in the body and tail of the gland, although in a less marked degree.

"The contents of the cyst had all been evacuated, but the microscope showed numerous crystals of hæmatin lying on the surface of its lining mucous membrane.

"Thin sections under the microscope showed that the acini of the gland were diminished in size, the epithelial cells constituting their secreting structure being in a state of granular degeneration, and presenting an abundance of oil-globules; and in some of the larger ones could be seen numerous crystals of margarine. The white and yellow fibrous tissue forming the stroma of the gland were increased in quantity, and evidently, by their pressure, contributed to the degeneration and atrophy of the secreting structure, aided, doubtless, by the presence of the dilated duct.

"After the fat was dissolved out by sulphuric ether, a small quantity of acetic acid was added, which brought out clearly the immense number of elongated nuclei existing in the fibrous tissue, and thus attested its vigorous nutrition and growth.

"In view of these facts, the committee submits that the

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* *Amer. Jour. Med. Sci.*, January, 1871, p. 160.

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specimen is a well-marked case of cirrhosis of the pancreas, and believes that the cyst is a retention-cyst caused by constriction of the excreting duct of the gland (duct of Wirsung); the constriction probably having its origin in some attack of subacute interstitial inflammation, which had been attended by the exudation of lymph,—such an inflammation as constitutes an essential part of the first stage of cirrhosis."

The small intestine was distended with blood, which was dark and, for the most part, fluid. No other disease of the abdominal viscera was found.

Remarks.—Apart from the comparative rarity of disease of the pancreas, and the decided rarity of the termination which occurred in the present case, considerable interest attaches to this observation on account of the great obscurity of the diagnosis. Hemorrhage from the intestines is a symptom of many morbid conditions, among which may be mentioned (without referring to typhoid fever and the other zymotic diseases in which it occurs) hemorrhoids, ulceration or polyp of the rectum, albuminoid disease of the alimentary canal, cirrhosis of the liver, cancer or ulcer of the stomach, some rather rare forms of intestinal ulceration, cancer of the walls of the bowel, and aneurismal tumors opening into the intestines. Some of these causes never lead to hæmatemesis together with melæna; and indeed it is only in the case of cancer or ulcer of the stomach, cancer of the upper part of the intestines, cirrhosis of the liver, and albuminoid degeneration of the gastro-intestinal mucous membrane, or in the event of an aneurism opening into the duodenum, that this combination is apt to be observed.

In the present case, the rectum was carefully examined during life and found healthy. The entire absence of gastric pain, nausea or vomiting, and epigastric tumor precluded the idea either of cancer or ulcer of the stomach. The most careful examination of the abdomen failed to detect the presence of any tumor, whether aneurismal or solid. The habits of the patient and the decrease in the area of hepatic dulness alike favored the idea of cirrhosis of the liver; and it is true that this disease is a very frequent cause of gastric and intestinal hemorrhage. Still, in the present case, the decrease in the size of the liver was but trifling, and there was absence of the symptoms of chronic gastric catarrh (which almost invariably attend the second stage of cirrhosis), of enlargement of the spleen, of distention of the superficial veins of the abdominal walls, and of ascites. It appeared probable, therefore, that, although a slight degree of cirrhosis was present, it was not sufficient to account for the profuse and frequently-repeated hemorrhages.

So, too, in cases of albuminoid degeneration of the gastro-intestinal mucous membrane, hemorrhage is a frequent symptom. In the present case, however, there was no history of syphilis, of bone disease, or of protracted suppuration; and there was, further, no enlargement either of liver or spleen, nor was the urine albuminous; and, as is well known, it is extremely rare for primary albuminoid disease of the alimentary canal to occur without implication of the liver, spleen, and kidneys. Still, such a condition cannot be said to be impossible.

Finally, in cases where the upper part of the intestine is involved in a vascular cancerous growth, the amount of hemorrhage may be so great as to lead to hæmatemesis as well as intestinal hemorrhage. In the present instance, however, no tumor could be detected. There was no cancerous cachexia (to which I attach comparatively little significance), nor any pain or tenderness.

After carefully weighing these different elements in the diagnosis, it appeared impossible to determine the condition more closely than that the patient had a moderate degree of cirrhosis of the liver, in connection with some organic disease of the intestinal walls, probably either albuminoid or cancerous in its nature. It will be observed that the autopsy confirmed the first portion of this diagnosis, but that the real source of the hemorrhage was from a large cyst developed in the head of the pancreas by distention of its excreting duct.

In conclusion, it is interesting to point out the entire absence of any positive symptoms of pancreatic tumor or disease. The most reliable of these symptoms are a tumor in the epigastric region, pain, referred usually to the epigastrium or to the back, jaundice, vomiting, and constipation, together with marked emaciation and debility. In some cases of cancer or of cystic disease of the pancreas, a marked tendency to passive hemorrhage has been observed; and, in a few instances on record, hemorrhage into the intestine has occurred, either through an ulcerated communication between the pancreas and duodenum, or through the dilated duct, as in the present case. Intestinal hemorrhage cannot, however, be regarded as by any means even a probable symptom of pancreatic disease, and in no such case on record, that I am familiar with, has death resulted from gastro-intestinal hemorrhage.* Of all of the above which are in any way characteristic of pancreatic tumor, not one was present in the case just narrated. The absence of fatty stools has been so frequently observed in cases of pancreatic disease, and the physiological views as to the action of the pancreas in digesting fats have been so much modified, that little importance can be attached to their absence in the present instance. This case will, then, at least tend to further illustrate the great obscurity which at present surrounds the diagnosis of pancreatic disease, while it may also serve to furnish an explanation of profuse gastro-intestinal hemorrhage in any case where none of the more usual causes of that symptom can be detected.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROFESSOR GROSS.

Reported by James Graham, M.D.

NEUROMA OF STUMP.

HIRAM B., aged 23 years, a mulatto. Five and a half years ago he had his right arm amputated in the middle, by the circular method, for a gunshot wound by a minie-ball. The parts healed kindly, and for six months after the operation the stump was free from pain, and he could use it freely. He was then discharged from the army, and commenced selling papers on the cars. The strap supporting them rested on his right shoulder; and this pressure, he thinks, was the cause of his after-trouble, which consisted at first of occasional jerking pains in the end of the stump, and in the course of about a year a tumor formed on the inner side of the arm, exquisitely tender to the touch, and the seat of an almost constant gnawing pain. A year and a half ago, Dr. Post removed this growth, and he was for some five or six months entirely free from suffering; at the end of that time the tumor returned.

He is now pale and emaciated, his sleep is disturbed, and he is subject to attacks of vertigo. The stump is well formed, but its extremity is drawn rather tightly over the end of the bone, by the contraction of the cicatrix from the previous operation, and is subject to occasional distressing twitchings. An inch and a half above this point, on the inner side, and at the site of the scar, is a bulbous enlargement of the nerves, of firm consistence, and from two to three inches in length. Touching it gives rise to the most excruciating pain, and it is a constant source of suffering, aggravated by the slightest changes in the weather or any disturbance of the digestive organs.

The patient was brought under the influence of chloroform, and an elliptical portion, embracing the old scar, removed from the end of the stump. There was slight roughness of the extremity of the bone, which was smoothed off with the pliers. The tumor above was then dissected out. It was found to be closely connected with the biceps and the brachial artery, the vessel having to be divided in its removal. It appeared to be an expansion of the median nerve, enlarged to many times its normal diameter for the space of two or three inches. The wound was brought together with twisted sutures, the old scar being cut away. There was a slight blush of erysipelas on the second day, but it disappeared under the application of a

* In a case reported by Dr. J. M. Da Costa (see *Proc. of Path. Soc. of Philadelphia*, vol. i. p. 9, 1860), the immediate cause of death was profuse pulmonary hemorrhage, for which no explanatory lesion was found at the autopsy.

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strong solution of sugar of lead and opium, and the pins were removed at the end of a week, union by first intention having taken place throughout the greater part of the wound.

Three months after the operation he was in greatly improved general health, and there had been no recurrence of the pain.

Dr. W. W. Keen examined the tumor microscopically, and found a remarkable augmentation of the connective tissue and an apparent increase of the nerve-fibres from division.

NASAL POLYPS AND ANAL FISTULE.

Geo. F., aged 48 years, from Illinois. This patient says he has a polyp in his nose. The organ is expanded, and, on throwing his head backwards, a tumor is seen in both nostrils, filling up the entire passage. He complains of difficulty in breathing, a profuse purulent discharge, and pain when he takes a cold in his head, to which he is very subject during his sleep. He snores loudly, and lies with his head retracted, assuming this position in order to bring the mouth in a more direct line with the larynx.

There are two forms of nasal polyps,—the fibrous and the gelatinoid. The fibrous is generally single, occurs at any period of life, and frequently recurs after removal. It is usually situated far back in the nostril, and generally grows, by a broad base, from the floor of the nose or superior turbinated bone, and at times from the septum or walls. When it is attached to the base of the skull, it is called a naso-pharyngeal polyp. It is of a dark-red color, firm consistence, and liable to bleed freely.

The gelatinoid is almost always gregarious, is most common in elderly subjects, and is generally attached by a narrow pedicle to the superior turbinated bone. In its general appearance it resembles an oyster, being soft, white, and glistening, and on its surface is a delicate network of vessels.

In this case the tumor is of the gelatinoid variety. There might be perforation of the septum, and the one tumor appear at both nostrils, but that is not probable. I will introduce this long, delicate pair of forceps along the floor of the cavity, open them, elevate the blades, and then, seizing the pedicle, rotate the instrument on its axis, and with very slight traction I remove the mass. This is one of the largest tumors of the kind I ever saw. The mucous membrane on its lower border, where it was in contact with the air, is red and thickened. It is pyriform in shape, and measures fully three inches in length. You see immediately on its withdrawal another project itself half an inch from the nares. This one I remove in a similar manner. It resembles in size and appearance the other. The hemorrhage need not deter you from continuing the operation, as you must be guided entirely by the sense of touch. (Two others, of nearly equal size, were then removed from the left nostril). The patient can now breathe freely; the bleeding is slight, and will soon cease spontaneously. I make it an invariable rule to inform my patients that there are probably other smaller growths behind, which, through time, may require another operation.

He is also troubled with an anal fistule. He will get on his elbows and knees, and you see two openings on the right side, about an inch and a quarter from the verge of the anus. On inserting the probe, I find they communicate with the bowel some five or six lines above, which is the usual position. Formerly it was thought that the internal opening existed as high up as two and a half or three inches; but the able dissections of Dr. Ribes and Dr. Horner proved the contrary. When the former view was acted on, the resulting wound was necessarily a large one. I will now substitute a grooved director for the probe, and bring it out at the anus,—a mode of operating originally suggested by myself,—and then with a single sweep of a probe-pointed bistoury the sinus is laid open; also divide the track between the two external openings and scrape away the adventitious matter that lines it. I will next insert a tent wet with sweet oil into the wound, which we will allow to remain for three or four days, the bowels being locked in the mean time. At the expiration of that period a mild laxative or enema will be given.

[The man was again presented to the class in the course of a week, when seven additional polyps, of small size, were removed, showing their gregarious character. He was discharged cured at the expiration of another week.]

UNIVERSITY OF PENNSYLVANIA.

SURGICAL CLINIC OF JAMES E. GARRETSON, M.D.

Reported by Dr. Frank Muhlenberg.

CLEFT PALATE.

CASE I.—During my former lectures, when cases of this description have been presented for your examination and study, I have taken occasion to remark the usual concomitant occurrence of cleft palate with hare-lip, and that in the great majority of cases the affections are congenital. In this little boy now before you, who is but four years of age, we find, however, the existence of but the one, and that one which is, from its situation and surroundings, more difficult to treat successfully by an operation,—viz., cleft palate. We do not intend operating upon him to-day, as his vitality is at present below par, and, as I will show you in the remarks to be made on the subsequent case, it very often happens that, although the operation in itself may be neatly and successfully performed, subsequent union of the parts will not take place, as the result of causes which will then be mentioned. I only present him as a somewhat peculiar and interesting exemplification of the congenital character of this affection. He is one of four children, all of whom are laboring under the same lusus naturæ, but the parents, strange to say, are perfectly free from any disease or deficiency of either the hard or soft parts of the roof of the mouth. The eldest child has a very large opening; the second, a smaller one; this boy, who is the third child, a still more diminutive one; and in the youngest it amounts to nothing more than a small hole. This case is not, as I have remarked, ready for relief by an operation, and will return at some subsequent date.

DOUBLE AND COMPLICATED HARE-LIP.

Case II.—This patient's face is no doubt familiar to you all, for he has been before the clinic on four or five occasions, and, in addition to the interest always connected with cases of this description, this case has been pre-eminently so as demonstrating the process of repair in tissues, its sudden arrest, but subsequent renewal and accomplishment, as the result of appropriate assimilation, induced by tonic treatment. Six weeks ago he was presented to you as laboring under double hare-lip, and also cleft palate of both the hard and soft parts,—both of these lesions being congenital and of twenty-five years' standing. I then attempted to relieve him of the latter affection by the usual process of freshening the edges of the soft palate, and by bringing them together by means of the interrupted suture, after making an incision in the mucous membrane on each side of the wound, hoped to obtain good union; remarking, however, that the great trouble with these cases was the disposition of the parts to slough. He again presented himself three weeks subsequently, and on examination we discovered that the parts seemed to be beginning to put on degenerative action. At his own request, we operated then for the double hare-lip by our usual method, leaving a slip to serve as a substitute for the bulb always seen at the median raphé of the upper lip. The edges being freshened, the pins were introduced and the ligatures applied around them by figure-of-8 turns. The patient then left us, and when we saw him, a week after this last operation, the parts still refused to heal, either in the palate or the lip; and we determined to start, if possible, the proper assimilative process by the administration of tonics, in the form of twenty-five drops of tinct. ferri chlor. three times daily. As the granulating surfaces were also weak, we reapplied the straps of adhesive plaster, to give them support and remove all the strain necessarily made upon them by the action of the muscles attached to the angles of the mouth. Under this plan of treatment we have attained now—in two weeks' time—the most encouraging results. The parts have all nicely healed, and the granulations are contracting, as usually happens in this mode of repair. The long slip, which seemed out of place, has almost disappeared, and has accommodated itself very nicely to the position of the bulb of the upper lip. The contraction will still go on and the scar become much less in size, and we may now discharge this patient as cured, remarking that had we not placed him on a tonic, as we did, to raise his vitality to a higher standard,

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the parts would possibly have sloughed very extensively, and an unsightly condition have been the sequence. This was evidently a case in which we might say aplastic lymph was exuded; and I cannot but add a few words here, in connection with this subject, on the repair of tissues. Mr. John Hunter, and others generally received as authority on such subjects, state that there are five methods of repair in tissues,—viz.: 1. By the first intention. 2. By the adhesive inflammation. 3. By the second intention. 4. By the third intention. 5. By the subcrustaceous cicatrization. Now, in my humble judgment, I think that Mr. Hunter and the other learned gentlemen were somewhat unhappy in the selection of five different names for a process which is essentially one and the same in the repair of all tissues; indeed, it is nothing more than an extension of a perfectly normal and natural process,—one that is going on constantly, even when no wound exists in the parts. You all know what blastema means. If we break an egg, we have, in the albumen, the analogue of the lymph thrown out in the repair of tissues; and I apprehend that in all repair we have lymph thrown out,—that, in other words, it is a process or action constantly going on, even in healthy tissues in which there is no break or loss of continuity, and that it is not, necessarily, the result of inflammation. It is being constantly thrown out by the vessels in the normal condition of a part, in which there exists circulation and assimilation of the particles intended for each particular organ. The natural condition of the part certainly is this; and if we take a finger as an example, we will see that the process of repair, both in its uninjured and wounded condition, is nearly one and the same. In their healthy state the parts are being laved in the blastemic exudation going on all the time from the circulatory vessels, and each nerve, each tendon, each muscle, each cartilage, etc. is appropriating to itself by its chemico-vital force just those elements which nature intended it to receive, and no other. It rejects what cannot be of service to it; and thus a nerve will not receive the material intended for cartilage, nor the reverse. Treviranus it was, I think, who said that "each single part of the body, in respect to its nutrition, stands to the whole body in the relation of an excreted substance;" and our views at the present day seem to be in consonance with those of this distinguished author. If such now is the normal condition of the parts, what ensues when we interrupt the natural process of assimilation and repair? Suppose we cut our finger with a very sharp knife, making a clean incision, and then immediately coaptate the parts, binding the sides of the wound firmly together? You will all tell me it heals nicely and no scar is left. It heals, in other words, by what Mr. Hunter and others call first intention. If any excess of lymph is here thrown out, I think the quantity must be very small; indeed, the repair can properly be said to be nothing but a continuation of that process which was going on in the part just previous to the incision. It was merely interrupted for the time being, but recommenced as soon as the interrupting cause (the knife) was withdrawn. The blastema, or lymph, is again thrown out, and all goes along as before; the cut vessels are united, there is but little irritation in the part, and the wound heals without an observable cicatrix, or by the first intention of Hunter. It is held now that even when a wound is gaping, and the sides are at some distance from each other, the process of repair is the same as in the above case; and it is an unfortunate error to designate as *five* what is really but *one* method. Call it granulation if you will, or call it adhesion, it is naught but the continuation of the natural process. Neither does it necessarily require the existence of inflammation to carry on this process. Mr. Paget says that "the process of repair is different in man from what it is in animals; that in the latter it engenders much more inflammatory process and provisional callus, and, as a rule, it is different in the two;" quoting also, as an exception in man, the cases of undiscovered fractures of a humerus, rib, and clavicle, in all of which cases the amount of surrounding callus resembles that found in the fractures of animals. But these very three cases, I think, prove the incorrectness of the theory; for place the animal with the broken limb under the same favorable circumstances as man,—put its limb in a splint and at rest,—and the result would be nearly the same as in his case. In the cases Mr. Paget mentions, the parts were constantly moved about, irritation and undue inflammation were set up, and a condition resulted similar to that in animals under the same circumstances.

In the case before us, the parts refused to heal, as a result of degeneration and from lack of vitality, both local and general. We therefore placed him on specific treatment, in the hope of furnishing to the blood such healthy particles that, these being properly assimilated, degeneration would cease and repair commence. Such has been, most happily, the case; and it seems to give us hope that the day will come when all requirements will be so far understood and appreciated that the physician will be able to control disease to a far greater extent than at present.

Poisoning of Children by Whiskey.—Dr. P. De Marmion (*New York Med. Jour.*, December, 1870) describes three cases of poisoning of children by whiskey, two of which were fatal. The symptoms were complete coma, very rapid stertorous breathing (80 per minute), lowered temperature (93½°–94° in axilla), and involuntary discharges. In the two cases treated by himself, liq. ammoniæ acetatis was used freely, and in the case that recovered the doctor appears to attribute the favorable termination to an enema of two ounces of the remedy. In the third case a post-mortem was made. The chief peculiarities discovered were intense venous congestion of the lungs, liver, and kidneys, distention of the right heart, and absence of rigor mortis from the arms and neck. Dr. De Marmion believes acetate of ammonia to be the sovereign remedy in acute alcoholic poisoning, and that it acts by increasing the rapidity of the retarded blood-current and maintaining the fluidity of the blood, whose integrity is threatened by the coagulating action of the alcohol.

Hereditary Syphilis (Oedmannson: *Nord. Archiv.*, i. 4, p. 73. Prof. Schuppel: *Archiv. f. Heilkunde*, vol. xi., 1 Heft).—In five out of nine cases of hereditary syphilis the cord and placenta were affected to such a degree that death could be directly attributed to these alterations. This process consists of an atheromatous degeneration of the cord, with thickening of the intima, which may become converted into a calcareous shell, loosely connected with the subjacent parts. In most cases there existed placentitis interstitialis, which sometimes embraces half this organ, which is found thickened and converted into a hard, firm, almost cicatricial tissue. The umbilical veins are contracted, while the arteries are narrowed in calibre and sometimes entirely occluded by organized thrombi.

Prof. Schuppel describes, under the name of pylephlebitis syphilitica, the following manifestation of congenital syphilis. The liver is enlarged, and in the soft, relaxed parenchyma of the organ, hard nodular masses and cords can be felt, which on section are found to follow the course of the portal vein. The lumina of the vessels are greatly narrowed by a growth having its seat in their walls, the central layer of which is of a grayish-yellow color, opaque, and dry, while the external broader layers are of a pale gray color, soft, and somewhat transparent, and gradually and imperceptibly pass into the tissue of the liver. This growth corresponds microscopically with the gummata syphilitica of the adult, consisting of numerous lymphoid cells, which are well preserved in the peripheral layers, while towards the centre they are converted into a finely granular detritus mixed with fatty molecules. The groundwork of the growth consists of an imperfectly fibrillated connective tissue, in which here and there cheesy deposits and pigmentary masses are found. An infiltration of lymphoid cells takes place in the substance of the liver itself.

Dystocia from Male Infants.—The difference in size between the heads of boys at birth and the heads of girls is very slight, amounting only to three-eighths of an inch in circumference,—just such a difference as might be produced by enclosing the head in a single fold of a table-napkin. Yet so nicely is the size of the fœtal head adapted to the capacity of the pelvic canal, that this slight difference is enough to make the birth of the male more than twice as fatal to the mother as the birth of the female infant; whilst the proportion of stillbirths among male infants is nearly twice as great as that of girls.—*Edin. Med. Jour.*, December, 1870.

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EDITORIAL.

SANITARY LAWS.

THE subject of sanitary laws may engage attention in two senses. First, in our regarding them as synonymous with the natural laws of health, which grow out of the very constitution of the living body and its relations to the physical agents by which it is surrounded and its several organs stimulated and sustained. Secondly, in considering them as enactments by constituted authorities for the abatement and removal of nuisances, preventing the spread of contagious diseases, and enforcing observances for the preservation of the public health.

Our remarks on this occasion will be chiefly directed to the latter of these two views of sanitary laws. To make legislation effectual, there must be knowledge and sincerity on the part alike of the law-makers and the great body of the people on whose behalf the laws are made; and also a clear understanding between the two parties that the law has been framed after a due study of the wants of the case and the best means of meeting them, and that the people, when it has been promulgated, shall be able to see its true bearings, and to recognize, from their own observation and experience, its utility and the feasibility of its enforcement. These conditions for useful legislation and enactment are binding under all circumstances, but in an especial manner are they called for in framing and giving effect to sanitary laws. Now, it happens too frequently that these conditions are not complied with, neither the legislators nor the people having the requisite knowledge of the matters to be acted on. The persons—viz., members of the medical profession—who it might be believed know best the requirements for preserving health and preventing diseases the result of hygienic neglect, are not the ones elected for sanitary government. Let us confess, however, that medical men in the aggregate do not, either in their collegiate course or by subsequent study, acquire a due comprehension of the numerous subjects which come within the range of public and family and personal hygiene, to enable them to fill the part of ready and judicious advisers and guides in sanitary questions, as they come under notice daily and almost hourly. Still, from them chiefly, if not solely, are the people under the necessity of gathering the needful suggestions for their sanitary welfare, under a belief that their counsellors have made themselves depositaries of knowledge to meet all contingencies. If the people of any community are deceived on this point, no blame should attach to them; nor should we be surprised, although we cannot help being pained, at their own ignorance of the evils that exist detrimental to health. Early instruction, or instruction at any time, in hygiene in their common schools and colleges, if given at all, is exceptional by its infrequency. Hence the public are not prepared either to incite or to give their ready assent to sanitary legislation. Grosser nuisances, such as damaged food, garbage and filth on the streets and byways, and certain manufactures which offend the senses, are admitted on all sides to require stringent sanitary enactments for their removal and against their recurrence. But if sanitary inspection be extended to the interior of houses and their immediate surroundings, and it be shown that there are noisome and overflowing cesspools, offal accumulated in corners of yards or in cellars, and tenement-rooms crowded with lodgers, at the risk of suffocation and the engendering of the worst forms of fever, there is by no means a ready acquiescence, if there is not actual opposition, on the part of the tenants and owners of these houses to the cleansing and purifying measures adopted by a board of health, or the municipal government, when it becomes alarmed at the imminence of an endemic or epidemic disease, the local causes of which had been allowed to increase and accumulate unheeded. The subjects of sewerage and the disposal of sewage, in a sanitary and economical point of view, are far from being settled by sanitary legislation, although in both important improvements have been made. The manner in which quarantine should be enforced, with due regard to the health of all the parties concerned and to the interests of commerce, does not rest on universally-recognized grounds. Speculative views of the nature of contagion and of its multifarious sources, and excessive fears of its virulence, on the one side, and intense greed, which for present gain would nullify all quarantine regulations, on the other, leave much to be adjusted for procuring general assent and support.

There are other ways of poisoning the air that we breathe than by effluvia from decomposing vegetable and animal matters and the residue of substances used in manufactures,—which require sanitary legislation. Legal prohibitions are framed against the sale of tainted meat and decaying vegetables, but none are found against the vicious architectural arrangements by which tainted air is allowed to accumulate in crowded rooms, halls, and churches from deficient ventilation. People are poisoned daily and nightly by the retained irrespirable gases and animal exhalations whenever they meet in numbers. Judges, jurymen, pleaders, and witnesses are in this way punished in their court-rooms, alike with the juveniles and their teachers in their school-rooms, the preacher and his congregation, the singers and the crowd collected to enjoy their melodious strains. Why should it not be made a part of the duty of building-inspectors to see, not only that public edifices of all kinds shall be so constructed as to prevent loss of

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life or personal injury by their giving way when completed, but also to prevent, by suitable provision for ventilation of these buildings, the bodily suffering at the time and subsequent disease of those persons who will be collected in them for the various purposes just named? The common defects in the construction of buildings, owing to which their occupants for the time can neither breathe without oppression nor hear what is said or sung, are a positive fraud on the public who are promised instruction or amusement, as the case may be, but which is imperfectly gained at the cost of comfort and health. One might wonder at this lack of applied science in pneumatics and acoustics being tolerated as it is by the multitudinous sufferers, were they not, in the first case, so generally ignorant of the function of respiration and the requirements for its healthy discharge, and at the same time accustomed, in their own houses and lodgings, to imperfect ventilation and its consequences, in headaches, oppressed feelings in the chest, dyspepsia, nervous disorder, lassitude, and debility, from which they suffer on each occasion of assemblage for a short period in public halls. Here again the aid of building-inspectors should be invoked, and power given them, after suitable measurements of the capacity of the rooms of a new house, to inscribe on a mural tablet the number of persons who can, without their health suffering, occupy for the night one or more of these rooms. As things now are, it will be found that the inmates of a majority of inhabited houses have neither the requisite number of cubic inches of respirable air in their bedrooms, in which so large a portion of the twenty-four hours is passed, nor proper openings for the continual introduction of fresh atmospheric air, and the escape of that which has become deleterious in the process of breathing and by exhalations from the skin. Just now we need only advert to hospital ventilation, the problem of which has not been satisfactorily solved, although great advances towards this end have been made of late years. In the name of common humanity our municipal governments ought to be loudly and urgently entreated to take stringent measures for preventing the accumulation of crowds of human beings in the rooms of tenement- and lodging-houses. Murder and manslaughter are punished with all the severity enjoined by law; and what should exempt those parties from infamous punishment who, speculating on the necessities and ignorance of the poor and the outcast, increase their gains by renting rooms in which these unfortunate beings herd together like cattle collected for the shambles, and encounter nightly the dangers and at times the reality of suffocation and its concomitant distresses,—ten of the lodgers taking the space and consuming the air that would be a scant allowance for one?

The great sanitary want, next to that of fresh air, is pure water, supplies of which are furnished to cities and towns by the joint action of chartered companies and legislative bodies. Everywhere is felt the necessity of enlisting the aid of the engineer and the architect to procure an abundant influx of pure water, even from great distances, and its collection in large reservoirs, to meet not only present but future wants of the inhabitants. An appropriation of a portion of this supply for public baths has been at last made by the municipal authorities of some of our chief cities. We must be content with the attainment of the real hygienic object, personal cleanliness and health, by the erection of these bath-houses, and not allow ourselves to indulge in comparisons between them and the immense and magnificent edifices of ancient Rome, which included apartments for every variety of bathing, and within whose vast precincts were found temples, palestræ for all kinds of athletic exercises, and extensive libraries. Regarded as a means of promoting health and amusement, which is itself hygienic, the enclosing of grounds and preparing covered ways and the needful apparatus for public gymnasia would be a fit subject for sanitary legislation. In a moral point of view these establishments are of great service, by the expenditure of redundant excitability and of instinctive eagerness for bodily action of the young, who are in so many instances prone to mischievous sports under the natural prompting for exercise.

We conclude these observations by recurring to our belief expressed at the beginning,—viz., the necessity of the great body of the people having a knowledge of real sanitary wants and ability to appreciate and sustain sanitary laws framed for their benefit. No great scientific preparation is required for this purpose. Children, even in the nursery, and still more easily when acquiring the elements of learning, might soon gather up in conversation with their seniors, and without formal inculcation, a knowledge of the composition of the atmosphere and some of the properties of the gases of which it consists, and particularly the uses of oxygen in respiration. They might be told of nitrogen and nitrogenous compounds in connection with animal food and animal decay, in contrast with starch and sugar and gum. An acquaintance with elementary anatomy and physiology might be begun by a little girl when watching the cook or her mother eviscerating a chicken and seeing the parts spread out on a table, and also by a boy in witnessing the preparation of an ox, a sheep, or a lamb for sale by the butcher. A brief primer of anatomy and physiology would do the rest. Much could be done by the physician in his intercourse with little folks, who would be strongly impressed with anything he might say on the structure and functions of their bodies, and how their health would be benefited or injured. Children often speak correctly and fluently before they know the meaning of grammar; they might with equal readiness, by the aid of proper surroundings and conversation, gather the elements of sanitary science before they could be supposed to be ready to hear scientific lectures and witness scientific demonstrations. A very important aid in the diffusion of this so-much-needed knowledge would be found in the establishment of courses of popular lectures on physiology and hygiene. People in general are quick to learn and appreciate the meaning and value of what is said, when they find in it a constant application to themselves.

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OPIUM-CULTURE.

THERE appears to be no reason for the practical monopoly which Turkey and Egypt hold of the European and American opium markets, and efforts are at last being made all over the world to test the pecuniary feasibility of growing the poppy. According to Mr. John W. Hood, of Melbourne, Australia bids fair to become a source of the drug. Last season about a hundred-weight and a half was sold in the Victoria market, and proved to be of very good quality, containing from eight to ten per cent. of morphia. The yield appears to have varied from fifty to eighty-four pounds an acre, but no doubt will be increased as the best method of cultivation becomes better understood. According to Julius Jobst, it is very probable that in Germany opium will hereafter become a staple production. The present season has been unfortunate. The early continued dry weather injured the plants very much, and the war breaking out just at the critical time interfered very greatly with the gathering of the crop, much of which was in consequence lost. The best Würtemberg opium will bring on the spot a paying price, and the yield of morphia is twelve per cent., even in moist samples. The climate of England is said to be too damp for the culture of the poppy. In our own country experiments have been made, but not as yet with assured success. There can be no doubt but that the poppy plant will flourish somewhere within our wide-spread limits. Whether opium can be produced with profit is a different question. Last spring, when endeavoring to get some seed for a correspondent, we were informed by the seedsman that the market had been thoroughly swept by parties purchasing for planting in the South-west. Of the results obtained there we know nothing, but in the January number of the *Journal of Pharmacy* Mr. George W. Kennedy gives the experience of a friend in Illinois. The plants did not do very well, those in a wet soil failing altogether, and many of those receiving good garden-culture producing little or no opium, so that the average yield was very small. The opium itself appears to have been of good quality, containing 8.75 per cent. of morphia.

DISPENSARY FOR SKIN DISEASES.

WE are glad to learn that an incorporated institution of this name has been organized and opened in this city for the gratuitous treatment of all cutaneous diseases. We believe that this is the first independent dispensary for the treatment of these affections established in America, all the others being at present attached to hospital or medical schools. It is a common feeling among the profession here that skin diseases are comparatively rare in this country, and the natural but unfortunate result has been that but little special attention has, until very recently, been given to their study. Doubtless there is, to a certain extent, good ground for this impression, but none the less must any one, who is familiar with the class of patients applying at our general dispensaries, be acquainted with the fact that there are large numbers of the poor of this and other American cities suffering from cutaneous disease, often in very aggravated forms. We are satisfied that a wide field of usefulness lies before this new dispensary, and trust that the results of its operations may accrue as well to the interests of science as to the benefit of the patients who apply to it for relief. The new dispensary is regularly incorporated, chartered, and under the management of a board of trustees, consisting of Prof. S. D. Gross, President, and Messrs. H. A. Duhring, F. Collins, E. N. Wright, and J. Warner Johnson. The treatment of the patients, which will be entirely gratuitous, is under the charge of Dr. L. A. Duhring, who has fitted himself in an eminent degree for this special work by prolonged study of cutaneous diseases in London, Paris, and Vienna. The dispensary is located at 216 South Eleventh Street,—the hour for the application of patients being 11 A.M. daily.

TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held December 28, 1870, at 8 P.M., Dr. W. H. Pancoast, President, in the chair.

At the request of the President, DR. TURNBULL gave some account of cases of pyæmia as recorded in "Register of Surgical Operations," reported by the medical officers under F. V. Hayden, M.D., in charge of Sheridan U. S. A. General Hospital during the late war. He referred to the records of twenty cases of death from pyæmia among the Federal troops, out of two hundred and eighty-four amputations, and fourteen deaths from the same cause out of one hundred and seventy-five Confederate soldiers. He also detailed the four following autopsies, which seem to shed some light upon the fearful mortality which attends this form of blood-poisoning from the introduction of pus or some septic material into the circulation. In one case the left lung was filled with abscesses; a cupful of liquid pus was found in the left pleural cavity; there was even pus here and there on the surface of the peritoneum; the spleen was highly congested; the other organs were normal. In another case, where amputation had been performed below the knee at the upper third of the leg, there were found caries of the femur up to the trochanter major, scattered collections of pus throughout the whole stump, and pus in the veins; the intestines were congested, the mucous membrane pultaceous, but no perforations had occurred; adhesions were present in both pleural cavities, the spleen was enlarged, small abscesses existed in the liver; the kidneys were healthy. In a third case the stump was partially healed, the femoral vein contained pus, the femoral artery was brittle and easily ruptured; the intestines were congested; the left lobe of the liver contained abscesses; the spleen was almost entirely disintegrated; no pus was found in the lungs; the heart was flabby, the left kidney congested. In a fourth case there were phlebitis, pus in the internal saphenous and obturator veins, a few ounces of pus between the glutei muscles, pus in the capsular ligament of the hip-joint, and a quart of pus in the left pleural cavity. There were tubercles at the apex of the right lung, and softening tubercles in the middle lobe of the right lung.

Dr. Turnbull was of the opinion that no specific treatment (as that by bromine, iodine, hypo- or bi-sulphites) was of much utility in pyæmia while pus was pent up; and this he has proven in numerous cases of purulent ear-disease, a case of which he reported,—viz.: A young girl suffered from a neg-

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lected discharge, with perforation of the membrana tympani, when, on exposure to cold, an acute inflammation arose, attacking the mucous membrane lining the mastoid cells. No outlet being made for the suppuration, the lateral sinus became affected, fever followed, and after some time death terminated the case. At the autopsy pus was found in the lateral sinus, and a secondary abscess was found in the cerebellum.

He then spoke of the great importance of opening the abscess over the mastoid process before extensive ulceration or caries had taken place, and stated that, should we be called when the acute stage is passed and there is a narrow opening, it is proper to enlarge it, and even scrape the bone, if soft and carious, with a hollow chisel. At the same time the patient's strength should be supported with nourishing diet, alteratives, and tonics. He had performed the operation of trephining this bone for this affection for the first time in this country in 1862, and has repeated it with success.

He also dwelt upon the great importance of the treatment of "Otitis media purulenta," or the otorrhœa of the older writers, —a disease very prevalent among children,—and stated that he was satisfied, from numerous observations, that, when neglected, there is apt to be developed cheesy degeneration of the lymphatic glands, which is often followed by phthisis. He was supported in this opinion by the testimony of Holmes and Niemeyer. The first, in his recent work, observes, "I have also maintained in the following pages an opinion which has been forced upon me by clinical experience, but which, since the appearance of the first edition of this work,* has been sustained in a remarkable manner by the experimental researches of Dr. Wilson Fox† and others, that local disease is frequently not the symptom but the cause of the constitutional diathesis, and that one of the strongest motives for operative interference in the exhaustive diseases of childhood is to be found in the consideration that they prove the source of fatal visceral mischief."

Dr. Hornor, U. S. N., spoke of a disease which occurred in the Piedmont district in the State of Virginia, during the past summer, which commenced in the Texas cattle, and spread among the hogs, chickens, and other inferior animals. This disease, although enveloped in obscurity, he believed to be similar to pyæmia. It was infectious. The symptoms were as follows: There is fever, with a temperature of 103° F.; the red corpuscles lose their vitality,—the blood will not coagulate; there is hemorrhagic leakage from the bladder; the gait is staggering,—the sick animal falls down and rests upon the brisket; there is great enlargement of the pupil and eyeball; and delirium. All of these symptoms point to a true blood-poisoning. Whether the poison or virus is an effluvium, or is taken into the stomach with the food and water, or is the ixodes reticulatus or tick which infests the skin of Texas cattle, observation and the microscope have yet to decide. Post-mortem examination of the cattle which died from this affection showed the lungs to have been highly inflamed, ulcerated, and filled with pus; the manyplies or third stomach was distended, gizzard-like, with impacted food, unmasticated and hard; the small intestines on their mucous surface were mottled and in a gangrenous condition. The sac of the renal gland was filled with blood to the amount of two gallons. The chemico-vital changes referred to defy all remedies.

Hypodermic Use of Morphia.—Dr. Clifford Allbutt (*The London Practitioner*, December, 1870) calls attention to the possibility of the hypodermic use of morphia becoming habitual, and states that he himself has now under care nine patients in whom neuralgic pains recur so soon as the injections are omitted, and who are in truth morphia devotees. He states his belief that reliance upon morphia thus given in neuralgia, rheumatism, etc. only ends in a curious state of perpetuated pain, of irritability and depression, and of artificial need of a certain stimulant.

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*The Surgical Treatment of the Diseases of Infancy and Childhood, by O. Holmes, M.A., Cantab. (second edition), 1869, Preface, p. xi.

†On the Artificial Production of Tubercle in the Lower Animals. London, 1868.

CORRESPONDENCE.

LETTER FROM WHEELING, W. VA.

FROM JAMES E. REEVES, M.D.

To the Editor of the Medical Times.

Wheeling, October, 1870.

Dear Sir,—I send you the notes of a very unusual case of epilepsy which I met during the past summer. If they seem sufficiently interesting, I should be glad to see them appear in your columns:

G. W. D.; son of a farmer in Frederick County, Maryland; of healthy descent; æt. 34; height 5 ft. 11 in.; weight prior to his ill health 170 pounds, but for the past seven years average 140 pounds; light hair and eyes; wears No. 6⅞ hat. Did not like to work on the farm. Quitted home at the age of sixteen years, and engaged at Elba Furnace and Iron-Works, Howard County, Maryland, on the line of the Baltimore and Ohio Railroad. At the age of twenty, because of his remarkable business skill, he was given entire control of the above-named extensive works, which he conducted successfully for the next eight or ten years. Very soon, however, after assuming the responsible and complex labors of his new position he suffered a sudden suspension of consciousness, gave a look of confusion, and tottered for a moment. In a few days thereafter he was stricken down with enteric fever, and suffered a most severe form of the disease, marked by delirium and stupor; he was dangerously ill for four weeks.

About three months after recovery from this febrile attack he suffered another momentary vertigo and loss of consciousness; then another and another, with gradually increasing severity, until five years from the date of the first attack of unconsciousness, when he fell suddenly to the ground, senseless and convulsed. A few months previous to this severe seizure he was married, being at that time apparently in the fulness of health. Two years later, having had in the mean time several seizures of greater or less severity, he complained of weakened memory and forgetfulness, and his friends noticed that he was growing exceedingly irritable and impatient in disposition. In December, 1863, or nearly seven years from the date of his recovery from his attack of typhoid fever, he suffered an unusually severe seizure, which has left its effects to the present. On recovery from the spasm, which lasted for an hour or more, he got hold of an old violin on which he used to saw, and, instead of using the bow, *picked* unremittingly for forty-eight hours an old tune he had learned in his boyhood. The following June he had two seizures; then, after an exciting dance, in September another; and from that date (1864) to the 4th of April, 1870, the attacks have come on every three or five weeks, each one followed by an uncontrollable impulse to make hurried music of the same old tune, and at which exercise he has occupied himself from twelve to forty-eight hours, taking the while neither food nor drink. Indeed, at such times he cannot be interrupted without the danger of exciting violent and unmanageable rage; and if he fail, at the moment when the impulse for music seizes him, to be supplied with some sort of musical instrument, his frenzy is almost unconquerable. His friends well understand him, and are careful never to suffer him to go from home without at least the safety of a jews-harp!

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The attacks have invariably come on at midnight, and continued as regularly twelve hours, during which he has been known to suffer twelve or thirteen spasms. After recovering from the fall and spasm, he is occupied twelve to forty-eight hours with his music; during the next thirty-six hours, sometimes he is a raving, violent madman,—may be coaxed, but cannot be coerced, outside of a strait-jacket. On one occasion, restraint being attempted by his aged father, he attacked him and choked him almost to death. At another time, being in Baltimore, a policeman mistook the condition of the man, and the poor fellow was cast into a station-house for resisting the officer. At another time he rushed into a Maryland court-house, before an astonished judge and jury, to arrest sentence of death which was being pronounced upon a negro felon, and he was imprisoned for *contempt of court!*

Some of his friends have declared that he possesses the gift of *prophecy*, and they adduce in evidence that a few days before destruction came along the banks of the Patapsco, in July, 1868, he minutely foretold the terrible flood. It must be true, however, that for several hours immediately preceding the seizures he possesses a wonderful power of memory, for I have been assured by his wife, who is an intelligent lady, that at such times, after a first reading, he can recite page after page of any sort of matter, with scarcely a mistake.

Occasionally he complains of pain in the right side of the head, which is usually accompanied with flushed face. He is fond of company, but does not now engage in business of any kind; and, though very religious, devouring all the religious books he can lay hands upon,—which are soon forgotten,—he is passionately fond of cards. He has always slept well, has good appetite and easy digestion, and is an immoderate *water*-drinker and slave to tobacco; has long been a smoker, and habitually consumes five or six segars after each tea.

He has been under various plans of treatment; had his back once burned thoroughly by the moxa, and an issue made in the back of his neck. Has taken bromide of potassium in large doses, and continued them for a year at a time. During the last three years he has had but little treatment of any kind, and thinks he is as well if not better off "without the use of medicine."

He has two children, the eldest a son, now eight years of age, who has had spasms since he was five years of age.

Such is the history of this unfortunate epileptic, told as faithfully as I am able to tell it; and I feel all the more sorrow for him because of his pride, which, even yet, leads him to try to conceal his condition under a most gentlemanly deportment.

REVIEWS AND BOOK NOTICES.

MEDICAL AND SURGICAL REPORTS OF THE BOSTON CITY HOSPITAL. First Series. 8vo, pp. 688. Boston, Little & Brown, 1871.

In proceeding to briefly notice the papers composing this portly and handsome volume, we shall first invite attention to those treating of medical subjects.

Cases of Pneumonia. By J. A. BORLAND.—From this paper we learn that during the five years from the opening of the Hospital on June 1, 1864, to June 1, 1869, 190 cases of pneumonia were treated in it. The larger number occurred in males and in foreigners, and as many as 107 in persons whose occupations did not involve exposure to all kinds of weather. The average age of the males was 31 yrs. 5 mos.; of the females, 30 yrs. 7 mos. The 190 cases of pneumonia were one-nineteenth of the whole number of cases admitted during the same period of time. The smallest number of cases were received during June (5) and July (5), then rising steadily through August (9), September (10), and October (15), until the chills of November (20) raised the point of development to that resulting from winter's cold (62), and the maximum being reached during the existence of the combination of cold and dampness as brought about in our spring weather (64). 107 were pure cases of pneumonia; 83 were complicated with other forms of disease. The uncomplicated cases averaged nearly eleven days sick before entrance, and twenty-three days and a half under treatment in the hospital. The complicated cases averaged a little over ten days sick before entrance, and thirty days' residence in the wards.

The treatment adopted was essentially that of Dr. Bennett, of Edinburgh, and known as the restorative treatment. In a number of cases wine of antimony was given in minute doses of six or eight drops every hour. Dr. Borland says of it, "Our cases treated in this way have been very satisfactory; no nausea or depressing effect of any sort has been observed, but the medicine has acted like a true tonic." The mortality in the uncomplicated cases was ten, or one to every ten and one-seventh cases,—a result which the author admits is not comparable with those attained by Prof. Bennett; and the question at once suggests itself to his mind whether pneumonia is a severer disease in this country than in Scotland. We are unable to answer this question fully, but, although having ourselves strong prepossessions in favor of the restorative treatment, we know that success such as Dr. Bennett claims for it has never been obtained in this city. The histories of the 190 cases are given in a tabular form at the end of the paper.

Treatment of Acute Rheumatism. By JOHN G. BLAKE.—This paper is also accompanied by a table giving some details of 300 cases of acute rheumatism treated at the Boston City Hospital, the object of the writer being to contrast the results obtained by the alkaline and the non-alkaline treatment. In 125 cases treated with large doses of the alkalies, the average stay in the hospital was 25 days, and cardiac complications were developed in 18. In 175 cases treated in other ways, the average stay was 35 days, and cardiac complications were developed in 18. Two deaths occurred among those treated with the alkalies, although the alkalies were given in the doses recommended by Dr. Fuller. These results are certainly not much in favor of the alkaline treatment.

Treatment of Skin Diseases. By HOWARD F. DAMON.—The department for the treatment of skin diseases was instituted April 11, 1868, and between this date and June 1, 1869, 900 patients sought relief there. The purpose of the author in writing this paper is to present "the number, sex, and age of those affected, together with the approximate duration and causes of the different cutaneous diseases." It is not easy to make an analysis of such a paper, and we shall not attempt it. The author thinks it very likely that climate or geographical position, together with the peculiar habits of a people, has much to do with the character and prevalence of cutaneous disease, inasmuch as the cutaneous covering must be the first part of the system to suffer from the vicissitudes of climate. The contents of the paper show that Dr. Damon has abundant opportunities for the study of diseases of the skin, and that he makes good use of them. This paper is illustrated by several plates.

Typhoid and Typhus Fevers. By J. BAXTER UPHAM.—The tables appended to this paper present, in a condensed form, the history of all the undoubted cases of typhoid and typhus fever which have been treated in the Hospital during the first five years from its foundation. The number of cases of typhoid fever treated was 152. The treatment adopted was mainly expectant. The mortality was in the ratio of 1 to $7\frac{29}{100}$ cases. Nearly half the cases occurred during the autumn months. In regard to the rose-colored spots, Dr. Upham says that the average time at which they were first seen in 65 cases, in the histories of which this fact was particularly noted, was between the twelfth and thirteenth days.

The number of cases of typhus, of which a tabular history is here given, is 38, and of this number 10 died. The treatment consisted essentially in the administration of beef-tea and stimulants.

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Peri-Uterine Inflammation. By A. D. SINCLAIR.—This is a very valuable paper, containing as it does the histories of no fewer than twenty-two cases of this affection, together with one of peri-uterine hematocele. The disease is said to occur most frequently after procured abortion, in women subject to menstrual irregularity, in the subjects of gonorrhœa and syphilis, and in those having had operations about the vagina, the cervix, or cavity of the uterus.

Our notice of the medical papers in this volume has been thus far almost entirely analytical, but we have not made it so because we have nothing to say in their praise. On the contrary, we think that Drs. Upham, Blake, Borland, Damon, and Sinclair have made valuable contributions to the histories and statistics of the different diseases of which they have written. It does indeed seem to us that undue prominence is given to the tables which accompany the papers on rheumatism, typhoid and typhus fevers, and pneumonia; and the idea will probably occur to others, as it has already done to ourselves, that from such a wealth of material much more elaborate papers might have been readily produced.

In proceeding next to speak of the surgical papers, we shall notice one by Dr. Bowditch on perinephritic abscess, a disease occupying a middle ground, coming primarily under the care of the physician, who has, however, eventually to invoke the surgeon's aid. Dr. Bowditch narrates nine cases, and lays great stress upon the importance of an early operation for the evacuation of the pus, thinking that if the incision or puncture is made soon the result is almost uniformly successful. He advises an exploratory opening as soon as the diagnosis is made, even though pus has not fully formed, and that the wound should be kept open by a tent.

This is a most unusual number of cases, of an affection comparatively rare, to have occurred within the experience of a single person. Were the diagnosis made by less competent authority, and not proved correct by the post-mortem evidences in the fatal cases, we could not repress some of that doubt which ever lurks in the critic's breast. We are not surprised to learn that Dr. Bowditch found some difficulty in persuading a surgeon to make an opening in one or two of his cases, and we think that most surgeons, if called upon to perform such an operation, would feel that it was eminently an exploratory one. The difficulty is to feel certain of our diagnosis where both rational and physical symptoms are so obscure; for, if well assured of the presence of pus, there would be no need of hesitation in making an incision which would not involve the peritoneum. The paper suggests the whole question of diagnosis in abdominal abscess, and is a valuable contribution to our knowledge upon the subject.

Twenty-eight excisions of joints have been performed during the five years the Hospital has been in operation. Of these, ten have been of the elbow, one of the wrist, eleven of the hip, and six of the knee, with a total mortality of 43 per cent. At the elbow, four were for caries, of which one recovered after amputation, and three were cured with good motion and without sinuses. Of six cases where the operation was done for compound fracture, three ultimately required amputation, of which one died, and two recovered and one died without further operative interference. The two who recovered without amputation were aged thirteen and thirty years, and were in hospital respectively sixty-three and one hundred and thirty-four days, when they were discharged, with good motion and without sinuses; and their appearance is shown by a lithograph. The wrist was excised once for caries with every prospect of success, but the case terminated fatally after ninety-eight days, from uræmia following gunshot wound of the kidney. At the hip all the operations were for disease; two of the number were upon adults, and were both followed by a fatal result. Of the nine done upon children, seven recovered, and two died from tubercle in other parts. Dr. Cheever thinks that in cases of caries the operation is unaccompanied with much shock, is not dangerous in children, and that the relief is equal to that experienced from the opening of an acute abscess. In hospital cases he advises an early operation,—viz., as soon as by grating or through the formation of an abscess we are certain of the existence of caries; but for patients in the better walks of life, or those surrounded by favorable hygienic influences, he does not recommend an operation save as a *dernier ressort* when it becomes evident that the patient will be worn out with the affection, thinking that the chance of recovery with a useful limb by care and nursing is quite as good without as with an operation. In all the cases recorded in this report the incision was V-shaped, and the flap was strapped back until the wound was well filled with granulations, thereby insuring thorough drainage. The gouge does not appear to be in much favor with the surgeons of the Boston City Hospital in these cases, they apparently preferring to trust to exfoliation for the removal of carious patches on the bones of the pelvis; and their success seems to justify their views. In one case the great trochanter was left, and, though it protruded through the wound so as to require extension by a weight for its reduction, Dr. Cheever expresses himself as much pleased with the result. The shortening seems to be about equal to that following spontaneous cure. In the knee there were six operations done,—all for disease. Of these two recovered after amputation of the thigh, and one child succumbed to pyæmia after removal of the limb. One child had firm union of the bones, and the wound soundly healed in 275 days; another was discharged at the end of 389 days, but the union of bone was still insecure at the expiration of three years. One adult recovered after 273 days, without sinus and with partial bony union.

Did our space permit, we should much like to notice in detail the remaining surgical papers in this volume, with the ophthalmic and aural reports. We have been especially interested in a paper, also by Dr. Cheever, upon the removal of naso-pharyngeal polypi by temporary displacement of the superior maxilla; but in the narrow limits afforded us it is impossible to do more than draw attention to the book as an evidence of public spirit on the part both of the medical staff and the trustees of the Hospital. We find ourselves wishing that the managers of similar institutions throughout the land could be familiar with the work before us, that their pure minds might be stirred up to emulate the example so well set before them by their Boston brethren. Were we disposed to find fault, we should say that the book is too handsome, being gotten up in such a style, both as regards paper, printing, and illustrations, as may tend to discourage others from attempting to follow it even *e longo intervallo.*

A SKETCH OF THE EARLY HISTORY OF PRACTICAL ANATOMY. The Introductory Address to the Course of Lectures on Anatomy at the Philadelphia School of Anatomy. By WILLIAM W. KEEN, M.D. Published by the Class. 8vo, pp. 31. Philadelphia, P. Madeira, 1870.

Introductory lectures treating of historical subjects are always interesting, not only to the class for whose members they are expressly prepared, but also to that larger audience they reach by publication. That Dr. Keen's class should have requested the printing of his recent admirable address speaks well for their judgment. After a few words of welcome, our lecturer becomes lost in the historian, who performs the difficult feat of compressing within thirty-one pages a history of practical anatomy, from Herophilus to the Pennsylvania Anatomy Act. He gives us an occasional break in the encyclopædic solidity of his style, to recite the pathetic ballad of The Invisible Girl, or to tell anew of that eighth wonder of the world, the Ruyschian Museum. The elaborate references and annotations visible on every page show that the labor of their preparation has been one of love. We would have been pleased had the space devoted to "how to prepare a mummy" —which process can scarcely be considered a branch of practical anatomy—been devoted to a more extended account of the history of anatomy in this country. The episode of Chant Street alone would, we opine, have been of unusual interest to the class.

THE GYNÆCOLOGICAL RECORD. By JOSEPH G. PINKHAM, A.M., M.D. 4to. Boston, J. Campbell, 1870.

This "book of blank forms," as the author modestly calls his work, cannot fail to attract all who are interested in the advancement of this branch of medical science. It gives a most convenient and readily-completed basis for a full and satisfactory account of a class of cases which, more than any other, need accurate and scientific study and description. No man, no matter how busy, can, with one of these Records in his hands, plead want of leisure to record his cases; neither

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can he fail, if he answers carefully and honestly each point in the history, symptomatology, and treatment, to put on record a case which will be most valuable for future reference, either for himself or others.

The book only allows space for twenty-five completed cases; but if these cases be well selected and carefully kept, even should only one book be filled by each practitioner, it would make a contribution to Gynæcology which, before many years, would enable us to settle definitely many points in the natural history and therapeutics of uterine disease which are now most obscure and unsettled.

We are glad to see that the author has adopted the diagrammatic method of recording the size and position of morbid growths, alterations in the normal position of the parts, and other gross changes.

Although the character of the work does not admit of any great display of ability or originality, yet we must cordially thank Dr. P. for the complete and admirable manner in which he has accomplished the object he had in view,—"An Aid to the Busy Practitioner."

SYPHILIS OF THE NERVOUS SYSTEM. By E. S. KEYES, M.D. Reprinted from the *New York Medical Journal*, November, 1870.

The thirty-four carefully recorded cases which are here narrated are valuable from the fact that they have all been seen and treated in the course of private practice or encountered in consultation with other physicians,—a point to be appreciated by observers laboring in hospitals, who depend for their knowledge of the previous condition of their cases upon a very questionable veracity. The following are among the more striking conclusions of the author:

That nervous symptoms depending upon syphilis *may arise within the first few weeks after an infecting chancre*, or at any period later during the life of the individual.

That mydriasis, existing alone, or with other nervous symptoms, without positive disease of the eye, is presumptive evidence of syphilis.

That the iodide of potassium *pushed rapidly to toleration*, unless the symptoms subside before that point is reached, is the main outline of treatment.

BOOKS AND PAMPHLETS RECEIVED.

On Diseases of the Spine and of the Nerves. By Charles B. Radcliffe, M.D., John N. Radcliffe, J. Warburton Begbee, M.D., Francis E. Anstie, M.D., and J. Russell Reynolds, M.D. 8vo, pp. 196. Philadelphia, Henry C. Lea, 1871.

On the Wasting Diseases of Children. By Eustace Smith, M.D. 8vo, pp. 266. Second American from the second revised and enlarged English edition. Philadelphia, Henry C. Lea, 1871.

The Raising and Education of Abandoned Children in Europe, with Statistics and General Remarks on the Subject. By Abraham Jacobi, M.D. Pamphlet, 12mo, pp. 43. New York, Bellevue Hospital Printing-Office, 1870.

The Relations of the Medical Profession to Modern Education. By Edw. S. Dunster, M.D. Pamphlet, 8vo, pp. 25. New York, D. Appleton & Co., 1870.

Proceedings of the Convention for the Reorganization of the Medical Society of the State of California, and of the First Annual Meeting: Together with the Constitution, Rules of Order, and Code of Ethics of the Society. Incorporated November 1, 1870. Pamphlet, 12mo, pp. 13. San Francisco, John H. Carmany & Co., 1870.

Retention of Urine Depending on Stricture. By Alex. W. Stein, M.D. Pamphlet, 8vo, pp. 16. Read before New York Medical Journal Association, December 9, 1870. New York, Robert J. Johnston, 1870.

Notes on the Physiology and Pathology of the Nervous System: Sclerosis of the Brain and Spinal Cord. By Meredith Clymer, M.D. (Reprinted from *New York Medical Journal*, May, 1870.) 8vo, pp. 53. New York, Appleton & Co., 1870.

Vaccination and its Protective Power in the State of West Virginia. By J. C. Hupp, M.D. 8vo, pp. 12. Wheeling, John Frew, 1871.

OBITUARIES.

DR. JOHN RHEA BARTON, who died in this city on the first day of the new year, at one time occupied a very prominent position among the distinguished surgeons of this country. His earlier and more mature manhood was devoted to active surgical practice, and his name at this day is associated with surgical accidents and appliances, in which he displayed a ready skill and ingenuity. So many years have elapsed since he retired from the active pursuit of his profession, that his name will be familiar to the student and the practitioner of to-day as associated with Barton's fracture of the lower end of the radius, Barton's bran dressing for fractures of the leg, Barton's bandage for fractured jaw, etc., rather than from any recent contributions to the science or improvements in the art of surgery. It is due to his memory, as well as to the medical world which in his honorable and useful professional career he adorned, that some facts connected with the history of his life should be put upon permanent record.

Dr. Barton was born in Lancaster, in April, 1794, and was therefore at the time of his death in his seventy-seventh year. He was the son of William Barton, a lawyer of that town, and nephew of Prof. Benjamin Barton, one of the first botanists of this country, and Professor of Materia Medica in the University of Pennsylvania. His brother, Dr. W. P. C. Barton, was at one time at the head of the U. S. Naval Bureau. It was the custom in those days, instead of electing the resident physician of the Pennsylvania Hospital from recent graduates, as at the present day, to regularly apprentice young men, commencing the study of medicine, for five years at that institution, their clothing being the sole expense to which they were subject, and their graduation at the University took place as near as possible to the expiration of that period. Rhea Barton must have entered upon his indentures about 1813, for he graduated in 1818, in a class honored by the names of Profs. Hugh L. Hodge and George B. Wood, Dr. D. F. Condie, and others whose after-careers shed lustre on their profession.* Some of these gentlemen, immediately before their mutual graduation, were brought into frequent contact and intimacy with the rising young surgeon, whose mechanical genius and ingenuity, remarkable even at that day in his manipulations and special management of fractures, were soon to be developed in active surgical experience with the world. The *internes* of the hospital at the same time were Drs. Benjamin H. Coates and Warwick Miller of Alexandria, the latter for some time deceased. Among his contemporaries, though graduates of a year or two later, were Drs. René La Roche, Isaac Hays, and John K. Mitchell. He practised his profession with remarkable success for over twenty years, finally retiring from active practice in 1840, though for years afterwards his opinion was frequently sought by his professional colleagues, who had seen so many demonstrations of his rare surgical skill. Many of his brilliant operations were performed while on duty as attending surgeon at the Pennsylvania Hospital, but in private practice he was not less distinguished. He never contributed largely to periodical medical literature, or gave to the world systematic treatises on surgical subjects. He was too busy with the arduous responsibilities and cares of practice to resort to the frequent use of the pen; though his operations and methods of treatment are still quoted. His memorable operations are at this day difficult to recall, but his resections for anchylosis, his modes of reducing fractures, etc., were strikingly original and successful.

* The surgeons in attendance at the hospital at that time were Drs. Physick, Dorsey, Hewson, and afterwards Dr. Hartshorne; the attending physicians, Drs. Otto and Park.

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EDWARD RHOADS, M.D.,

DIED JANUARY 15, 1871, AGED 29 YEARS.

THE subject of this brief notice was born in Philadelphia on September 29, 1841. His early education was conducted at his parents' home until the winter of 1853, when, at the age of twelve years, he was placed at the school of the Brothers Smiley, where he remained nearly two years, preparing for his collegiate course. Even at this early age he evinced both the mental and moral qualities which afterwards forcibly characterized him. He was especially distinguished, while a boy, by his fondness for natural objects and for the study of natural science. The same strongly-marked tastes showed themselves during his academic course at Haverford College, where he was admitted in 1855. He acquired a very thorough knowledge of Botany during his hours of leisure there; while his mastery of the ordinary branches of collegiate study was uniform and complete. In 1859 he graduated, with the highest distinction, at the head of his class. Unfortunately, soon after leaving college, a strong rheumatic diathesis manifested itself in a severe attack of articular rheumatism, complicated with endocarditis. He recovered after a long and hard struggle, but with a positive degree of mitral valvular disease.

The story of his professional life may be briefly told. He commenced his medical studies in the autumn of 1860, matriculating at the University of Pennsylvania. With him medical science was eminently the study of his choice; and he manifested such facility in mastering both its details and general principles as might have been expected from the assiduous devotion with which he pursued it, as well as from the well-trained powers of mind which he brought to the quest. He graduated with eminent distinction in March, 1863. Immediately after graduation he gained, by competitive examination, the position of Resident Physician in the Philadelphia Hospital, and on leaving there, in April, 1864, was elected to the corresponding position in the Pennsylvania Hospital, where he passed eighteen months. It is difficult to imagine one more fully prepared for his work, or more fitted to achieve the highest distinction both as a medical author and practitioner, than he was at this time. Shortly before leaving the Pennsylvania Hospital, however, a second attack of rheumatism seized him. This time he suffered (in addition to the articular inflammations) from a renewal of the old endocarditis, associated with pericarditis and left-sided pleurisy.

He was desperately ill for many weeks, but slowly recovered, and, so soon as his strength permitted, went abroad (in November, 1865). He spent about eight months in travelling in England and on the continent, and returned greatly improved in health, though showing unmistakable evidences of serious organic disease of the heart. It is possible, though far from being even highly probable, that, had he chosen a quiet, inactive life, he might have reached a much more advanced age; but such a course was utterly hostile to his vigorous and ambitious character.

Very soon after his return (in the summer of 1866) he was elected one of the visiting physicians to the Philadelphia Hospital. He entered upon the duties of this position with the utmost zeal and enthusiasm, and throughout his connection with the hospital devoted a large amount of time, and a larger amount of exertion than he could well afford, to the care of his patients, and to the various measures undertaken for the improvement of the organization of the hospital. His connection with this institution continued until a few weeks before his death, when, becoming convinced of the impossibility of ever re-entering upon duty in its wards, he resigned his position. He also commenced medical teaching, associating himself with several colleagues in the work of examining medical students, and delivered several courses of lectures on medical chemistry, especially in its relation to urinary diseases. He took part in the clinical teaching at the hospital, and delivered weekly lectures during six months of each year; while, at the same time, he formed private classes for more thorough clinical instruction in the wards. For some years before his death, Dr. Rhoads had paid special attention to the study of diseases of the chest, designing to devote himself more particularly to that branch of medical practice; and in the spring of 1870 he was chosen, by the Faculty of the University of Pennsylvania, to fill the newly-created position of Lecturer on Physical Diagnosis. He delivered the first portion of a course on this subject during April and May of the past year, when his last illness caused him to relinquish teaching, never to resume it. As a teacher he was singularly clear and impressive; and his earnestness of manner and evident sincerity and perfect truthfulness made his statements carry great weight with them. His style somewhat lacked vivacity, and the voice in which he lectured was, at times, monotonous; and, in addition, the constant dyspnœa from which he suffered during the last three or four years, made painfully evident the effort which it cost him to speak continuously for an hour to a large audience. He was uniformly beloved and esteemed by the students with whom he came in contact, and possessed the happy faculty of kindling in their minds an enthusiasm for medical science kindred to his own.

For several years before his death his private practice increased quite rapidly; and his public positions began to bring him forward, also, as a consultant. How tender, devoted, and skilful a practitioner he was, many grateful patients can testify. Dr. Rhoads was elected a member of many of the learned medical societies in this city, among which may be mentioned the College of Physicians, Academy of Natural Sciences, American Philosophical Society, and Pathological Society. He held offices in several of these, being recording secretary of the College of Physicians, and treasurer of the Pathological Society. It will readily be understood that with these numerous and onerous duties devolving upon him, in connection with the public positions which he held, there was but little time to devote to literary labor. He furnished numerous short papers to the proceedings of the Pathological Society, and aided Dr. J. F. Meigs in the preparation of an elaborate memoir on "The Morphological Changes of the Blood in Malarial Fever," which was published in the *Pennsylvania Hospital Reports*, vol. i., 1868. He also published (*id. op.*), in conjunction with Dr. William Pepper, the results of an investigation into the fluorescence of the tissues of the body, considered especially in connection with malarial diseases and the action of quinia. At the time of his decease, he left many valuable records of observations made at the Philadelphia Hospital, which would doubtless have served, had his life been spared, as a basis for important clinical treatises. He also wrote several able reviews, which appeared in the *American Journal of the Medical Sciences*, and in addition several addresses and articles on miscellaneous or religious subjects, none of which have been, to our knowledge, published. His style as a writer was clear, concise, and elegant; his diction was remarkably pure, and displayed a great familiarity with the structure and resources of the language. It is to be regretted that he left behind him no original work at all worthy of his powers as an observer and author. When, in the spring of 1870, it was determined to establish a semi-monthly medical journal in Philadelphia, its editorial management was intrusted to the care of Dr. Rhoads by the unanimous choice of the executive committee. He was enabled only to make the preliminary arrangements for the publication of THE MEDICAL TIMES, when his rapidly failing health compelled him to relinquish the helm which he could have guided with such consummate judgment and skill. The loss which this journal thus sustained, while still in embryo, can be fully appreciated only by those whose intimacy with him rendered them acquainted with the rare excellence of the qualities which he possessed for editorial labors.

We have already alluded to the fact that for about ten years before his death he had suffered with organic disease of the heart. Frequently during this period he presented, from the effects of overwork, alarming symptoms of disturbance of the circulation. Too rarely were any such admonitions heeded by him, and the call of duty usually summoned him back to active work ere he was sufficiently refreshed and recruited by repose. The spring of 1870 was to him a season of incessant toil and anxiety. Philadelphia was visited by a grave epidemic of relapsing fever, and the wards of the Philadelphia Hospital were overcrowded with hundreds of cases of the most severe form of the disease. After daily exposure for two months to the concentrated contagion, Dr. Rhoads contracted a mild attack of the fever in the early part of May, and, soon after convalescing from this, was attacked for the third time with articular rheumatism, which was soon followed by a recurrence of endo-pericarditis. For several weeks his

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life was almost despaired of, but the violence of the attack finally subsided, and during August he so far convalesced as to become able to bear the journey to West Chester. This improvement was, however, delusive and temporary. He never became able to use any exertion, and was never free from harassing and wearying dyspnœa. In October, the vigor of the heart failed rapidly, and symptoms of great circulatory embarrassment soon showed themselves. From that time, until January 15, 1871, the date of his death, his strength gradually failed, and œdema steadily increased, towards the close becoming associated with intense pulmonary congestion. He suffered constantly and most severely; and yet his serenity of spirit, his patience and perfect submission, his thoughtfulness and loving tenderness for all who were dear to him, never failed him for an instant until the very close.

On post-mortem examination, the heart was found enormously enlarged, weighing 35 ounces avoirdupois; the cavities of the right side were moderately dilated, while those of the left side, and especially the left auricle, were enormously so. The aortic valves were thickened and rigid, but the chief lesion was seated at the mitral valve, the leaflets of which were thickened, rigid, and fused with each other. There were extensive pleuritic adhesions, and complete obliteration of the pericardial sac. The brain was large and well formed, and weighed 57½ ounces avoirdupois.

In person Dr. Rhoads was of medium height and of strong build. His constitution, with the exception of the rheumatic diathesis which was so deeply impressed upon it, was vigorous, and capable of enduring the most severe tasks which could be inflicted upon it. His intellect was of a very high order, and was characterized less by any marked original or inventive power than by a rare development of the acquisitive, critical, and judicial faculties. The range of his intellectual sympathies was wide; his desire of acquiring knowledge was ardent and insatiable; his power of memorizing and correlating facts was very great; and his opinions were always marked by an unusual breadth of view, and evinced a clear, temperate, and well-balanced judgment.

He was no less remarkable for his traits of character than for his mental powers. From his earliest childhood he presented evidences of an impulsive, affectionate nature, overflowing with sympathy with all forms of suffering, and of a genial, social disposition, conjoined with a grace and charm of manner which won the hearts of all with whom he came in contact. In later years his strong emotions were under a rare degree of self-control, his sympathies were expanded by a deep love of humanity, and his personal attractions were enhanced by high culture and the results of foreign travel and a wide experience of the world.

He was in the fullest sense of the word a Christian, one who strove incessantly to govern every word and action in conformity with the divine law, and whose daily life showed forth, most consistently and forcibly, the indwelling grace of God. None met him and failed to be deeply impressed by the force of his example and by his character and powers. From his school-days throughout his life, he exerted an unusual degree of personal influence over his companions; and this influence, it may safely be said, was uniformly exercised for good.

We can but mourn that one so fitted, by intellectual endowments, high culture, and rare force and purity of character, to adorn the highest positions in the profession, should so prematurely (as it seems to us) have been taken away from our midst.

GLEANINGS FROM OUR EXCHANGES.

CRANIOTOMY.—Prof. A. R. Simpson, in his introductory lecture, states (*Edinburgh Med. Jour.*, December, 1870, p. 491) that, whereas formerly, in craniotomy, efforts were expended in the breaking down and removal of the vault of the cranium, the practitioner now exerts his powers to more purpose in diminishing the base, where the chief obstruction lies. Hence he can now apply his art with a degree of ease to himself and safety to the woman which in former days could not have been attained. There is a preparation in the Obstetrical Museum of the University of Edinburgh of the remains of the skull of a child which was delivered by Dr. James Hamilton. The arch of the cranium had been broken down and removed bit by bit, till only the base was left. "But, as it is precisely here where the difficulty lies, we do not wonder," says Prof. Simpson, "to hear Dr. Hamilton relate how, after having opened the head of this infant one midnight, he proceeded between nine and ten o'clock next morning to the extraction, and was kept at work for upwards of four hours, till at last he 'was literally obliged, from exhaustion, to be carried home in a sedan-chair at half-past two in the afternoon.' The improvements that have been effected in the instruments for performing craniotomy, and, above all, in the cephalotribe, give us the assurance that such a scene is not likely to be again enacted."

PREPARATIONS OF CONIUM.—Dr. Harley (*London Practitioner*, December, 1870) commends as the cheapest and most effective preparations of conium a tincture and spirituous extract made from the unripe seeds of either annual or biennial plants. He advises medical men to raise in some waste spot in their garden a dozen plants, which will yield them a pound of green fruit, from which, with very little trouble, may be made a tincture stronger than any juice that can be produced, and an extract of which three grains would produce decided effects in most persons.

POISONING BY HYPODERMIC USE OF MORPHIA.—Dr. Fred. D. Lente (*New York Medical Journal*, December, 1870) details a case in which most alarming symptoms followed the injection of a grain of morphia in two doses twenty minutes apart. The symptoms came on very suddenly some minutes after the last injection, and were the ordinary ones of opium-poisoning. There was complete insensibility, paralysis of sphincters, etc.; respirations only 3½ per minute; pulse 150–60, mostly of good strength. Atropia was used, but not in sufficient quantity to have any influence. The most interesting point in the case is that, after vesication of the chest by Granville's lotion, the respirations rose immediately to 4½ per minute, and in half an hour to 6. The woman finally recovered.

INTRAOCULAR CYSTICERCUS.—The following three interesting cases of intraocular cysticercus are reported in *Schmidt's Jahrbücher*, Bd. 148, No. 10, October, 1870. The first two were observed by Hirschberg (*Virchow's Arch.*, xlv. 3, 4, p. 509, 1869, and *Arch. f. Augen- u. Ohrenheilk.*, i. 2, p. 1, 1870), the last by Th. Sämisch (*Mon.-Bl. f. Augenheilk.*, viii. p. 170, Juni, 1870).

1. The affection involved the right eye of a woman twenty-six years of age. At first there could be seen in the very tense, entirely sightless bulb, behind the opacity of the lens, and at one side, a vascular prominence, which condition soon afterwards, on account of an effusion of blood into the vitreous humor, was no longer under control. The eyeball was removed and hardened, and its examination furnished the following: Size and shape normal; optic nerve, cornea, and sclerotica not altered; anterior chamber contracted; pupil and iris covered with a delicate, membranous, yellow exudation; the ciliary body on the sclerotic side covered over with a thick, gelatinous layer; the choroidea thickened; the retina entirely dissected off; the remains of the vitreous humor penetrated with membranous masses which were extended over the posterior part of the capsule of the lens and the contiguous surface of the ciliary body, and filled up with a small effusion of blood. The space between the detached retina and the choroidea was filled up with a soft, yellowish mass, composed partly of pure pus and partly of fibrous tissue, which again enclosed in itself a cavity without a definite boundary. The cavity was situated in the outer half of the bulb, and extended below to the deepest part of the eyeball and forwards as far as the ora serrata. It was 11 millim. (.43 in.) long, 5 millim. (.19 in.) broad, and 4 millim. (.15 in.) deep. In it there was a wrinkled mass, which represented a cysticercus-vesicle of uncommon size,—about 15 millim. (.59 in.) in diameter. The head was retracted, and the vesicle studded with small white points.

2. A robust man had been blind in the left eye for two years, and during the last three days the organ was actively inflamed. It was absolutely amaurotic; the episcle-

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rotica deeply injected; the iris thickened and discolored; the margin of the pupil attached to the lens, the latter opaque. The bulb was painful upon pressure in the ciliary region, but not opaque. As it could not be ascertained that the inflammation had supervened upon a catarrh, and as a tumor would have incited an inflammation much sooner than after the lapse of two years, the diagnosis of cysticercus was decided upon as the most probable. The patient himself did not suffer from tapeworm, but his wife had repeatedly passed segments. The enucleation of the bulb confirmed the diagnosis. The iris, ciliary body, and choroidea were thickened; the remains of the vitreous humor behind the opaque lens were traversed by fine membranes, and contained on one side a large blood-coagulum. The retina was detached, and behind it there was a vascular, soft, grayish and yellowish tissue, in which a smooth-walled cavity was observed. It contained a cysticercus-vesicle, 14 millim. long and 8 millim. broad, with a well-developed neck and head, upon which there were four sucking-disks containing abundant pigment. From its state of good preservation, it must be admitted in this as in the preceding case that the parasite was still living at the time of the enucleation.

3. A woman, aged 38, had noticed, in the spring of 1860, a diminution of the power of vision in the right eye, without any inflammation. In the commencement of 1861 the sight was entirely gone. Cataracta reducta and iridochoriodeitis, with, however, normal tension and absence of symptoms of irritation, were ascertained in the year 1867. In the spring of 1870, for the first time, inflammatory symptoms made their appearance: the upper lid was swollen, the episclerotica reddened, the iris discolored and adherent to the lens; in the anterior chamber there was an effusion of blood. As the left eye likewise soon exhibited inflammatory symptoms, the right bulb was extirpated. It had the normal diameter of 22½ millim. (.88 in.), and was immediately opened in the horizontal meridian; in so doing the knife encountered a hard mass, which had to be divided with the scissors. The rest of the cut was completed with the knife, which caused a somewhat viscid fluid to escape. The bulb was divided by a partition lying in front of the equator into an anterior and posterior half; the latter was again divided by a second partition—having its origin in the optic nerve—into two lateral cavities, the smaller one of which was situated towards the nose. In the larger cavity lying towards the temporal region there was situated a cysticercus-vesicle about 7 millim. (.27 in.) in diameter, which had already been cut in opening the bulb. The crown of hooks and the four sucking-disks could be plainly seen upon the retracted head. The wall of the cavity which enclosed the parasite consisted of fibrous tissue, and was intimately connected with the choroidea; posteriorly there was developed a sheet of bone 10 millim. (.39 in.) long and 6 millim. (.23 in.) broad. The choroidea was moreover atrophied throughout, and the retina detached in the form of a thin string, which was merged into the second and smaller septum without any definite boundary-line.

The number of reported cases of dissections of intraocular cysticerci has amounted to seven,—the preceding three cases included. The earlier cases were observed by A. von Graefe, Soelberg Wells (Bader), A. von Graefe (Schweigger), and Jacobson (Recklinghausen). The number of cases of intraocular cysticerci observed in life is much larger (*Schmidt's Jahrb.*, cii. 221, cxxxiv. 320, cxxxv. 76, 205, *Arch. für Ophthalmologie*, Bd. ii. 1, 2, and *American Journal of the Medical Sciences*, N. S., vol. xxxiii. p. 468). The affection is, apparently, exceedingly rare in this country.

TUBAL PREGNANCY (SPIEGELBERG: *Arch. für Gynäkologie*).—The only authentic case of tubal pregnancy in which the fœtus attained maturity is related by Saxtorph, and the history of this case is not sufficiently minute to be made use of: so that the full clinical report of a similar case which occurred in the practice of Spiegelberg is of great interest. The patient was a peasant woman, 44 years old, pregnant for the fourth time, and had reached the end of gestation without any abnormal symptoms, when fugitive labor-pains were soon followed by convulsions, coma, rapid prostration, and death in a few days. The urine was albuminous, and contained urinary casts. A post-mortem examination disclosed a fully-developed dead fœtus, enclosed in membranes, and lying in a musculo-membranous sac which was formed by the distended and developed Fallopian tube, the placenta having its attachment anteriorly. A minute microscopic report by Waldeyer confirmed the opinion that it was only the tube which had taken part in the development of the sac. Bundles of muscular tissue were found, the tissue of the ovary recognized microscopically, and, by careful manipulation, the folds of the right broad ligament were separated from one another up to the point where the sac commenced, which thus corresponded with the position occupied by the Fallopian tube, while a probe passed from the angle of the uterus into the sac along a short canal. Spiegelberg explains the fatal termination of the case by the eclampsia of the mother causing the death of the fœtus, subsequent separation of the placenta, hemorrhage into the sac, which was already distended to its utmost capacity, rupture, and death from peritonitis. The diagnosis was not made during life, owing to the normal course of the pregnancy, and the fact that the tumor corresponded so closely in position and size with the gravid uterus.

TETANUS NEONATORUM (*Jahrbuch f. Kinderheilkunde*, vol. iii., 1870).—Bohn brings forward a new theory with regard to Tetanus Neonatorum, opposed to that of Schöller, viz., that this disease is due to irregular cicatrization or ulceration of the navel, and hence never occurs earlier than from one to five days after the detachment of the cord. In the town of Edling 136 cases occurred in the practice of one midwife. Of these cases 37 were observed by the physicians of that place, and in no instance was there any abnormal condition of the umbilicus. This led to an investigation, and it was found that this midwife had lost the power of appreciating the temperature of the water in which she immersed the child after birth, and by actual experiment it was found that on these occasions she habitually used water from 87° to 95°. According to Bohn, this tetanus is due to irritation of the sensitive cutaneous nerves, which produces reflex muscular contraction. Exposure to extremes of temperature, irritating gases, etc. may furnish this exciting cause; and hence the prevalence of this form of tetanus in Iceland, where the intense cold and smoky confined atmosphere of the dwellings, acting on the sensitive surface of the infant, combine to produce this disease. He does not, however, deny that exceptionally any local cause may also act as the source of irritation, as ulceration of the navel, circumcision, etc.

CAUTERIZATION IN DIPHTHERIA.—In the *48th Versammlung Deutsche Naturforscher und Aerzte*, Dr. Schuller stated that he had entirely abandoned cauterization of the pharynx, larynx, or conjunctiva in diphtheria. In numerous cases he had, as a crucial experiment, cauterized only one side of the fauces, and he had always been led to the same conclusions:

1st. That the membrane remained attached longer on the side which he had cauterized than on the other.

2d. That even the most energetic application of nitrate of silver failed to arrest the reproduction or to prevent the extension of the membrane.

3d. In some cases serious tumefaction and inflammation of the cervical lymphatics followed the application of the caustic.

In these views he was supported by Ebert, Stiebel, Cohen, Rinecker, and others, who direct the use of small pieces of ice to be constantly allowed to melt in the mouth, and employ a gargle of potass. chlor., alcohol, potass. permang., carbolic acid, etc.

EPIDEMIC OF CHOREA MINOR IN PRAGUE (STEINER: *Jahrbuch für Kinderheilkunde*, vol. iii.).—Professor Steiner reports an epidemic of chorea minor during the early winter months of 1870. He himself had 19 cases under observation, in none of which was there any possibility of contagion by imitation. In a previous paper on chorea, based on 52 cases, he developed his theory that this disease is the result of spinal irritation, and may be caused by various transitory or permanent irritants acting on an excitable nervous system. In this epidemic he finds additional evidence in favor of this theory, the exciting cause being the unusually cold and changeable winter weather, while the predisposing cause must be sought for in the delicate constitution and nervous excitable temperament of all the children affected, 18 of whom were girls; the greater frequency of the disease among females being apparent, as was the case in the 52 cases previously reported,

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only 12 of whom were boys. In 5 of the 19 cases which occurred epidemically, rheumatism or endocarditis with valvular lesion was found; so that if we regard this epidemic as rheumatic in character, we must admit that the meninges of the cord may be attacked, while the muscles, articulations, heart, etc. remain free. Potass. bromid. proved of no value; and again Professor Steiner praises the use of Fowler's solution in small ascending doses.

DEATH FROM SULPHURIC ETHER.—In the *Boston Medical and Surgical Journal* of December 8, Dr. Walter Burnham details such a case. The man was a well-built, healthy German, who had been shot the day before just above the patella, the ball passing through the condyles and out at the popliteal space, dividing the blood-vessels and nerves. There was no hemorrhage of any moment, owing to instant surgical appliances. At the time of operation the pulse was 80, and there were no symptoms of exhaustion or severe shock. An ounce of ether was put upon a napkin placed in a bowl, which was held so as to cover the face without touching it. One or two drachms of ether were added every two or three minutes. In about ten minutes (by guess) he was insensible, but, manifesting some signs of consciousness as the operation proceeded, the bowl was again placed over his nose. It required but a few seconds to induce profound anæsthesia. The doctor says, "I again removed the ether from his face, which the surgeon noticed, and impatiently ordered me to renew it. I reapplied the napkin, with a drachm of ether freshly poured upon it. After one or two inspirations the patient ceased to breathe." He was dead. The use of the knife was not finished, and there had been no hemorrhage. (We would comment on this case that time and measure were evidently simply guessed at, and that it is very probable that much more ether was really used than Dr. Burnham thinks.)

DISINFECTANTS.—The Chemical Society of Berlin has published a list of the most approved disinfectants, and the degree of concentration in which to apply them:

Permanganate of Potash.—One part of the pure salt is dissolved in one hundred parts of water. Where the crude material is used, five to ten parts of it to one hundred of water will suffice. This disinfectant acts upon liquids, and has little effect on solids.

Carbolic Acid Water is obtained by dissolving one part of pure crystallized carbolic acid (which can be rendered fluid by immersion in hot water) in one hundred parts of water. Crude carbolic acid should be taken in double the quantity.

Carbolic Acid Powder is prepared by mixing one hundred parts peat, gypsum, earth, sand, sawdust, or charcoal powder, with one part carbolic acid dissolved in water. Double the quantity of crude acid must be taken.

Carbolic Acid Wash.—Mix one part carbolic acid with one hundred parts milk of lime.

Chloride of Lime.—One part in one hundred of water.

Solution of Metallic Salts.—Better to prepare saturated solutions in water and frequently stir.

Suevern's Mass is composed of one hundred parts of slaked lime, fifteen parts coal tar, and fifteen parts chloride of magnesium dissolved in water.—*Journal of Applied Chemistry*, December, 1870.

GUMMY TUMOR OF THE THIGH MANIFESTING ITSELF FIFTY-FIVE YEARS AFTER THE PRIMARY LESION OF SYPHILIS.—A hale, stout, well-preserved gentleman, seventy-two years of age, consulted Dr. Alfred Fournier (*Revue Médicale Française et Etrangère*, 27 Août, 1870) in April, 1869, on account of a firm, indolent tumor which occupied the subcutaneous connective tissue on the inner side of the middle of the thigh, and was of about two months' standing. Its surface was uneven and largely bosselated, and it projected from four-fifths of an inch to two inches and a half, according to the point of measurement, above the general level of the thigh. It measured nearly six inches in length by four inches in breadth, and presented all the signs and the history of a gummy tumor. The skin was freely movable over it, and preserved its normal appearances, excepting at one point, where it was adherent and on the point of ulceration. Under the exhibition of iodide of potassium in doses which varied from forty-five to seventy-five grains daily, it had completely disappeared at the end of six weeks.

The previous history of the patient was briefly as follows. At the age of seventeen he contracted a chancre, which was followed for some months by secondary phenomena, of which the most prominent were ulceration of the mouth, and a tubercular syphilide. Up to the age of sixty-nine, or for an interval of fifty-two years, he was perfectly free from symptoms, when, in the midst of apparent good health, he was attacked with caries of the lower jaw, which was pronounced to be syphilitic by MM. Ricord, Nélaton, and Demarquay, and which yielded to iodide of potassium. Three years later, or at the age of seventy-two, the gummy tumor of the thigh made its appearance. The primary sore was the only venereal affection that he had ever contracted: so that the syphilitic virus remained dormant in his system for fifty-two years. This is probably the most remarkable example of the late appearance of tertiary accidents on record.

MISCELLANY.

WE find the following in the London *Medical Press and Circular* of September 7, 1870:

"AMERICAN STATUE TO HARVEY.—*Nature* announces that it is proposed to erect a statue of Harvey, the discoverer of the circulation of the blood, in the Central Park, New York, and large subscriptions have been received for that purpose. It is to be of bronze, of colossal proportions, representing 'Harvey at the moment he felt convinced he had made the great discovery that has immortalized his name.' Verily the American sculptors have a pleasant task before them. How does a philosopher usually look under such circumstances?"

THE "CONTAGIOUS DISEASES ACTS."—To the unbiassed seeker after the truth as to the working of these acts, the English medical journals are extremely unsatisfactory. According to one account, the popular mind rebels against the very idea; the registering and the periodical examination of the prostitutes are irksome and demoralizing; virtuous women are continually in danger of insult; and the sole object gained is to make guilty intercourse safer. But another statement is, that the number of public women is less, their behavior more decent, their health improved; and, in fact, one might almost suppose that this particular vice was robbed of all its objectionable features.

SINGULAR DECISION.—In a suit against some of the "peculiar people," in England, for causing the death of a child by neglecting to obtain medical advice for it, an acquittal was ordered by the judge, for the curious reason that the medical witnesses would not swear that the child would certainly have recovered if it had been placed under treatment.

NAVAL STAFF RANK.—Nothing seems to have been done, or to be likely to be done, in the matter of the staff officers of the navy. We cannot but think it curious that the present state of things, so little in accord with the fundamental principles of our governmental system, should maintain itself so firmly. One thing is certain: the matter has been so far agitated, that the best of the young men from whom the naval medical corps should be recruited will decline to enter a service which offers so little pay and so much chance of annoyance and humiliation.

CORONER'S OFFICE.—The coroner, through his deputy, took possession on Wednesday, January 4, of his new office, at the Morgue, corner of Beach and Noble Streets. We understand that the superintendent of the building is to act under the orders of the coroner, subject to the regulations established by law.

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WAR NOTES.—We have but few and meagre medical advices from the seat of war, although the English journals seem to have industrious correspondents. The greater part of their published letters are narratives of personal adventure and travel rather than of scientific observation. Indeed, it will be only after the vast mass of facts officially recorded shall have been sorted out and winnowed, and severely scrutinized by scientific eyes, that any valuable lessons will be derivable from the surgery of the Franco-Prussian struggle.

HOSPITAL APPOINTMENT.—On the 9th ult., Dr. Edwin Scholfield, Senior Visiting Accoucheur to the Philadelphia Hospital, resigned his position on account of ill health. The place has been actively sought by a number of candidates, including Drs. Getchell, McArthur, Ingham, G. Pepper, Jenks, Ford, and Hough. At the meeting of the Board of Guardians, January 23, Dr. George Pepper was elected on the second ballot.

DISAGREEMENTS BETWEEN DOCTORS.—A recent writer in the *British Medical Journal* inclines to the belief that differences of opinion are not more common between medical men than between lawyers,—perhaps not so much so. He says, "The analysis of the decisions of Lord Justice Giffard, sitting in appeal cases alone, from January to June, 1870, shows that of forty-one appeals from various courts, the decisions of those courts were affirmed in seventeen cases, reversed in nineteen cases, and varied in five cases. In applying this illustration to the cases of difference of opinion amongst medical experts in courts of justice, it must be remembered that in the great majority of cases to be decided—say ninety per cent. of railway compensation cases—medical opinion is unanimous. And such cases do not come into court. It is only where doubts and difficulties arise that a judicial decision in court is ordinarily asked. The cases of agreement, which are most numerous, are settled out of sight." We certainly think that a doctor, when duty calls him into court, sees in six hours more quarrelling between lawyers over points of difference of opinion than among his brother practitioners in six months.

INGENIOUS.—We have received the circular of an institution for the treatment of nervous diseases, inebriety, etc., backed up by a number of "extracts from letters of distinguished physicians." But on examination we find that these letters, from Drs. Brown, Rockwell, Galt, Kirkbride, and others, were written in answer to invitations to participate in the ceremonies of laying the corner-stone of the New York State Inebriate Asylum at Binghamton, N.Y., in September, 1858. It is, however, naïvely remarked that "they will apply with equal force to the 'Hospital for Nervous Diseases,' a similar institution." Perhaps it did not occur to the "Medical Director," whose name never had met our eyes before we saw it on his circular, that there might be differences between the two institutions in situation, plan, management, and other points, so that the writers of those letters would not care to have them used indiscriminately for the endorsement of either.

THE *Richmond and Louisville Medical Journal* states that the oldest practising physician in America is Dr. Theophilus Clark, of Tinmouth, Vt. He is ninety-eight years of age, has been practising continuously sixty-six years, is hale and hearty, and has no thought of giving up business yet.

DIED AT THEIR POSTS.—It is stated that during the prevalence of yellow fever in Mobile, Ala., last autumn, four physicians fell victims to the disease: Drs. T. J. Burke, William Toxey, Dabney H. Herndon, and Isaac W. Anderson.

LIFE INSURANCE.—We see it stated that the New York Life Insurance Company has established branch offices in London, Liverpool, and Manchester, and that the *Medical Press and Circular*, commending the enterprise, mentions several features in which the American law as to the life insurance business is superior to that in Great Britain. The statement that no company of this kind has ever failed in the United States, however, is unfortunately no longer true; a company in New Haven having been recently obliged to wind up their affairs.

RUMORED RESIGNATION.—A report is current in the city, and seems worthy of credit, that Dr. Henry H. Smith, Professor of Surgery in the University of Pennsylvania since 1855, intends resigning his chair upon the termination of the present session. We presume that there can be little doubt as to who his successor will be.

REMOVAL.—Dr. Packard has removed from No. 1415 to No. 1928 Spruce St.

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending		
	Jan. 7.	Jan. 14.	Jan. 21.
Diseases of the Brain and Nervous System	34	50	53
Diseases of the Organs of Circulation and Respiration	102	129	130
Diseases of the Abdominal Organs	16	22	20
Zymotic Diseases	30	25	26
Constitutional Diseases	5	7	7
Casualties	6	8	8
Stillborn	17	11	25
Unclassified	44	43	52
Unknown	1	1	2
Totals	255	296	323
Adults	124	162	159
Minors	131	134	164

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 4, 1871, TO JANUARY 17, 1871, INCLUSIVE.

MECHAM, A. F., SURGEON.—By par. 1, S. O. 8, Headquarters Department of the Missouri, January 12, 1871, granted leave of absence for *thirty days*, on surgeon's certificate of disability, with permission to go beyond the limits of this Department; and by par. 2, same order, relieved from duty at Fort Hays, Kansas.

TILTON, H. R., ASSISTANT-SURGEON.—By S. O. 386, Headquarters of the Army, A. G. O., December 31, 1870, leave of absence extended *sixty days*.

BREWER, J. W., ASSISTANT-SURGEON.—By S. O. 3, Headquarters Department of the Missouri, January 4, 1871, granted leave of absence for *thirty days*, on surgeon's certificate of disability, with permission to go beyond the limits of this Department.

DELANY, ALFRED, ASSISTANT-SURGEON.—By par. 2, S. O. 8, Headquarters Department of the Missouri, January 12, 1871, assigned to duty at Fort Hays, Kansas.

HALL, JOHN D., ASSISTANT-SURGEON.—By S. O. 2, Headquarters Military Division of the Pacific, January 4, 1871, granted leave of absence for *sixty days*, on surgeon's certificate of disability, with permission to go beyond the limits of the Department in which he is serving.

BILL, JOSEPH H., SURGEON.—By par. 30, S. O. 385, War Department, Adjutant-General's Office, December 31, 1870, at his own request, under provisions of act of Congress approved July 15, 1870, sect. 3, honorably discharged the service of the United States.

MARSH, E. J., ASSISTANT-SURGEON.—By par. 28, S. O. 385, War Department, A.G.O., December 31, 1870, par. 3, S. O. 209, C.S., from A. G. O., accepting his resignation, is revoked, and he is, at his own request, under provisions of act of Congress approved July 15, 1870, sect. 3, honorably discharged the service of the United States, to date August 17, 1870.

POPE, BENJAMIN F., ASSISTANT-SURGEON.—By par. 30, S. O. 385, War Department, A. G. O., December 31, 1870, at his own request, under provisions of act of Congress approved July 15, 1870, sect. 3, honorably discharged the service of the United States.

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WEDNESDAY, FEBRUARY 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON INFANTILE PARALYSIS.

BY JOHN S. PARRY, M.D.,

One of the Attending Accoucheurs to the Philadelphia Hospital.

GENTLEMEN: The importance of the subject of which I intend to speak in my lecture to-day is very great, on account of the serious symptoms often present at the commencement of the disease, and because it frequently results in a distressing and permanent deformity. The little patient who is now before you is the subject of an ordinary form of club-foot and club-hand; but, however interesting these may be to you as students of surgery, it is not to speak of them and their varieties that I have brought the case before you to-day. In her, as in a large majority of persons suffering from these deformities, they are not congenital, but are the result of a peculiar form of nervous disease to which children are liable. Indeed, it is asserted that nine-tenths of all cases of clubbed feet and hands treated in our orthopedic hospitals have the origin of which you will hear presently. I shall now read you the history of the case, hoping that enough has been said to secure your hearty attention.

HISTORY.—Ellie O'H., æt. 6 years, admitted to the children's asylum February 25, 1869.

Family History.—She is the third of six children, the oldest of whom is between twelve and thirteen. The second child of the family died when sixteen months old, of "summer-complaint." At this time, and when Ellie was about four months old, her mother began to suffer from tertiary syphilis, having nodes on the bones of the skull, on both tibiæ, and on the metacarpal bones. In May, 1870, I saw the mother, and found her suffering with nodes and specific ulcers on both legs, with numerous scars about the knee and over both tibiæ. On the left leg there were seven granulating ulcers. Of her children only the oldest and Ellie are now alive, the last three having lived but one or two weeks after birth. They none of them suffered from eruptions, but soon after birth began to waste, and died from exhaustion. The oldest child is perfectly healthy. The father died two years ago from profuse hæmatemesis,—I believe the result of cirrhosis of the liver. His wife denies that he ever had primary, secondary, or tertiary syphilis.

Previous history of Ellie's illness is as follows: When born, she appeared to be perfectly healthy, and continued so until four weeks old, when she fell from bed. During the next two weeks she was fretful, and at the end of that time a lump appeared near the junction of the lumbar vertebra with the sacrum. This was not very painful, nor tender to touch, nor red, and was about the size of an egg. It seems to have disappeared by suppuration. After this she continued well until she was two years old, when she walked from Sixth and South Streets to Shippen Street on a very hot day. During the next two weeks she was fretful, had a poor appetite, and was a little feverish; but her condition did not attract much attention, until one afternoon, two weeks after her walk, when she was put to sleep, as well as usual. When she awoke, she could not stand, having lost the power of the left side. The left leg was entirely motionless, and, when held up, fell as if dead. In the left arm there was slight power of movement. The power of the right side was perfect, and the face was natural and not drawn to either side. Sensation upon the affected side was certainly not lost, and it was possibly a little hyperæsthetic. She had some headache, but there were no other cerebral symptoms,—neither convulsions nor somnolence. Her condition remained the same during the ensuing week, when she began to improve slightly, the earliest change being noticed in the hand and arm. Later, improvement occurred in the leg, and at the end of two months she began to walk a little.

Electro-muscular contractility and sensibility were not tested at that time. About five or six months after the occurrence of paralysis she began to have "fits," which sometimes came on two or three times a day. The convulsive movements affected the upper more than the lower extremities. She did not bite her tongue, but there was frothing at the mouth, and after the attack she remained stupid for about half an hour. Their whole duration was four or five months. Immediately preceding their onset she suffered from hard, painful swellings on the head, especially over the frontal bones. There was at the same time enlargement of the lymphatic glands of the neck. About two years ago she first had swelling of the knee and of the back of the hand. At the same time there was ulceration of the left side of the head, immediately in front of the ear, with disease of the left frontal bone. When she was admitted to this hospital she was very thin and weak, and since then has suffered several times from acute inflammatory swellings, partly synovial and partly bony. The left side is more frequently and more severely affected than the right. In July, 1869, she had synovitis of the left elbow and knee. In March, 1870, the right side was affected, and later the knee and elbow on the left were involved. Upon all these occasions the disease yielded to specific treatment.

Present condition, June 13, 1870.—A blonde, rather thin, and sits with her head drawn towards the left side. Left sterno-mastoid muscle is rigid. When still, her face is perfectly straight, but when she laughs it is slightly drawn towards the left. There is loss of power of the extensor and supinator muscles of the left forearm. The hand is flexed at right angles with the arm, and the latter is strongly pronated; and this deformity becomes more marked when she attempts any movement of the part. The fingers are strongly flexed, though she can extend them by a strong effort,—the movement being irregular. The hand is easily extended by passive motion.

There is no visible atrophy of the muscles of either arm or forearm on this side, and the circumference of the forearm immediately below the elbow is one-eighth of an inch greater than on the opposite side. At middle and at wrist the measurements are the same. The upper half of the radius appears to be thickened from inflammatory attacks which have occurred in the last two years. The extensor muscles and supinators respond very feebly to the induced current; the flexors and pronators, more vigorously.

When sitting with the feet unsupported, the left is extended and turned inward, but when standing it is decidedly everted, producing imperfect valgus. The great toe is straight, the others being decidedly everted and strongly flexed. All the muscles of the leg are much softer than on right side, and in the thigh there is visible atrophy of the adductors and sartorius. The circumference of the right thigh at its middle is 10¼ inches, of the left only 9 inches. The right leg just below the knee measures 7½ inches, and the left 7¼ inches.

Over the left frontal bone there is a depressed white cicatrix. Just anterior to the left ear, in the cicatrix left by the ulceration occurring when 2½ years old, is a well-marked keloid growth. Upon the back, at the junction of the lumbar vertebra and sacrum, is a large, depressed, white scar, the result of the disease occurring after the fall from bed. There are other scars upon other parts of the body.

There are no symptoms connected with the digestive system. The tongue is clean. The teeth are decayed and irregular; their development is imperfect, and the edges are serrated. Lungs and heart are healthy; and there is no genito-urinary disturbance, except a slight leucorrhœa.

The points to which I wish to call your special attention in the clinical history just read are the following: the suddenness of the onset of the disease; the complete—or, at least, almost complete—motor paralysis of the left side, while sensation remained unaffected; the utter absence of any cerebral symptoms; the rapid recovery, which began in the arm and not the leg, one week after the attack of paralysis occurred.

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I beg you to notice, too, that this recovery has not been complete, but that there is still some loss of power in the muscles of the extremities, with atrophy, flabbiness, and the curious deformities, clubbed-hand and clubbed-foot. In the leg, the alterations of the muscles are more manifest than in the arm, in which the diminution in size does not show at all. This, however, I am not inclined to attribute to the absence of wasting in the extensor and supinator muscles of the hand, but rather to the increase in the size of the bone,—the result of the specific disease which she has inherited.

You notice that your attention is not especially directed to this. I will not discuss its bearing upon the case until we come to study the cause of the disease. Remembering these points, I will attempt to determine the nature and seat of the disease which has produced the distortion in the extremities. It is a hemiplegia, which, as you know, is usually due to some cerebral lesion. Only two diseases would be likely to occur in a child so young as this was at the time of the attack, and even they are very infrequent. I allude to cerebral and meningeal apoplexy. In the former of these the blood is poured out into the substance, and in the latter upon the surface, of the brain, in the cavity of the arachnoid, the meshes of the pia mater, or between the bone and the dura mater. Both varieties of apoplexy are usually ushered in and followed by severe symptoms. If this paralysis were due to the existence of a coagulum of blood in the cerebral substance, its onset would have been marked by delirium or convulsions, while these would have been followed by somnolence or deep coma. In this case, however, the only cerebral symptom complained of is headache; and the history very distinctly states that there was an entire absence of convulsions, stupor, or coma at the time the paralysis appeared. Convulsions supervened, however, five or six months after the hemiplegia, and we think, without doubt, from another cause. They obviously had no association with the original nervous disease, but, as they were preceded and accompanied by painful swellings of the cranial bones, they possibly had a connection with the specific affection from which the child has suffered so severely.

If the hemiplegia here had a cerebral origin, the arm would be likely to have suffered more than the leg; while in this case the paralysis was originally complete in the lower and but partial in the upper extremity. The history which you have heard also tells us that improvement commenced in the arm, and that it was only at a later period that the child began to regain the power of the leg. This is not likely to be true of paralysis, which is the result of blood effused into the substance of the brain. Moreover, apoplexy would have been attended with more disturbance of sensation than was present here, for, instead of having anæsthesia, sensibility, if changed at all, was slightly augmented. The paralysis of cerebral hemorrhage would not be followed by the deformities which we see here, while they are the ordinary result of another form of nervous disease which is frequent in children. Nor is the peculiar atrophy of the muscles which you see in this child the result of apoplexy. If you examine the thigh closely, you notice that the diminution of its circumference, which amounts to an inch and a quarter, is chiefly due to loss of size in the adductor muscles, while there is a shallow groove in the line of the sartorius. In the disease to which I have alluded, the atrophy is uniform, and does not affect single muscles or groups of muscles.

Nor can we believe that the hemiplegia here was due to meningeal apoplexy; for if blood had been poured out upon the surface of the brain, the earliest symptoms would probably have been convulsive movements, first affecting the eyes. There would have been strabismus, the intensity of the convulsions would have increased rapidly, and they would have been followed by stupor or coma. Nothing of the kind has been recorded in the history which you have heard. In meningeal apoplexy, too, paralysis is not even a common symptom, for Legendre met with it in only one of nine cases, and Rilliet and Barthez in one of seventeen. Here, however, the paralysis was the striking and alarming symptom. Indeed, I believe that we may conclude that this child's brain was healthy at the time the palsy occurred; and if it were not, the disease did not have its origin in hemorrhage into the substance or upon the surface of the organ.

Let us now examine the spinal cord. You see that there is no distortion of the spine, and that there is no evidence of tenderness when pressure is made over the vertebræ. Some of you may have supposed that the disease was due to inflammation of the cord; but, if so, the disorder would not have improved so rapidly as it has done here, for myelitis is a progressive disease. It is also attended with loss of sensation as well as motion, which is not the history of this case. Myelitis, too, is accompanied by paralysis of the bladder and rectum, and the patient's urine is apt to be highly alkaline. All these were totally wanting here.

Then we conclude that we do not have to deal with inflammation of the cord; but I believe that the affection is one of this organ, and that the girl is suffering from what is commonly called infantile paralysis,—a disease which is by no means infrequent. The symptoms which you heard detailed when the history was read, and to which I especially directed your attention afterwards, most positively support the diagnosis which we have made.

(To be concluded.)

ORIGINAL COMMUNICATIONS.

CASES OF ABDOMINAL TUMOR

ATTENDED WITH PROFUSE SWEATING; WITH REMARKS ON THE INFLUENCE OF THE ABDOMINAL SYMPATHETIC NERVE OVER THE STATE OF THE SKIN AND INTESTINAL MUCOUS MEMBRANE.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania, one of the Attending Physicians of the Philadelphia Hospital, etc.

CASE I.—*Cancerous tumor in right axillary; intra-thoracic cancer(?); abdominal tumor,—presumedly of a cancerous nature; obstinate constipation; profuse sweating, at times unilateral; emaciation; cachexia; death. No autopsy.*

—— BAIRD, a laboring man, æt. 64 years, came under my observation March 11, 1864. He had enjoyed very good health until a few years previously, when he noticed a tumor low down in the right axilla. This now appeared as a hard, lobulated mass, with a base more than five inches in diameter, extending downwards as far as the fourth or fifth rib, and backwards under the scapula. It was firmly attached to the ribs, was perfectly dull on percussion, and presented marked pulsation and a distinct thrill. It did not cause any pressure on the axillary plexus of nerves.

On ausculting the tumor, a distinct, high-pitched aneurismal whirr was heard, which could be heard also from the base of the tumor along the upper part of the right thorax to the upper part of the sternum. In the recumbent position this sound was much less distinct, and was replaced by bronchial respiration. There was also bronchial respiration over the posterior part of the right thorax. There was a soft murmur, with the systole of the heart, transmitted towards the apex. He had also suffered from attacks of dyspnœa. Auscultation and percussion over the left lung gave normal results.

He complained of severe shooting pain in the course of the

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right sciatic nerve. There was also tenderness along the spine, increasing from the middle of the dorsal region downwards, with a puffy condition of the subcutaneous tissue around the lumbar region. There was an oval elevation on the right side of the vertebral column, less than one inch in height, and extending from the head of the tenth rib downwards for about four or five inches. This was moderately tender on pressure, and had gradually increased during the last six months; it pulsated, and presented a marked thrill. There was excessive pulsation of the femoral arteries, with marked thrill. On examining the epigastrium, a hard, immovable, pulsating tumor was detected, corresponding to the projection in the back.

He had lost some flesh and much strength, and presented a markedly sallow and cachectic appearance. His pulse was feeble, not rapid. He suffered much from profuse perspiration. His bowels were constipated, requiring the daily use of laxatives. He had some difficulty in passing urine, which was usually high-colored, and contained mucus and remarkably large and numerous crystals of oxalate of lime.

For some months no marked change occurred, but all the symptoms gradually aggravated. He lost flesh and strength, and presented a more markedly cachectic appearance. The pain was almost constant in the axillary tumor, at times extending up the right side of the head, in the back, and also in the course of both sciatic nerves. It was described as a burning, shooting, tingling pain, and to a great extent prevented sleep. It was relieved for a time by aconite in large doses; but this lost its effect, and he gained only transient relief from large doses of morphia.

The tumor in the right axilla slowly increased in size. The projection in the back also increased, and pulsated more strongly.

The sweats continued very profuse, and were not controlled by quinia or mineral acids. The constipation continued marked, requiring large doses of purgatives, as podophyllin gr. ss, and ext. colocynth. comp. gr. ij, to secure an evacuation.

The urine varied a good deal in quantity, but was usually scanty, high-colored, and passed with difficulty. His appetite was fair, tongue clean, and he never vomited. The pulse was more frequent, but not more feeble.

In August, the axillary tumor was much larger, and pulsation was more marked in the one along the right side of the lumbar and lower dorsal vertebræ. The edge of the liver was found to project below the ribs, and was hard and resisting on pressure. He still sweated very profusely. The urine was very much reduced in quantity, but became more free under the use of stimulating diuretics. He had several attacks of hemorrhage from the bowels. Pressure below the xiphoid cartilage upon the anterior surface of the abdominal tumor caused pain in the course of the lumbar and sciatic nerves.

By December 7, his legs were almost paralytic, and a bedsore had begun to form over the sacrum. The axillary tumor had increased, and extended up under the pectoral muscle. The lumbar tumor projected more, and pulsated more powerfully.

In February, 1865, he was found thinner and weaker. Local symptoms but little changed. He complained of occasional difficulty in deglutition. Urine continued scanty. He still sweated profusely, and insisted that if he turned upon either side in bed, the *opposite* side would break out in a copious sweat in a few minutes, while the one upon which he lay would remain dry. He stated that this occurred invariably, and that the sweat was limited accurately to one-half of the body. The loss of power over the legs increased. The tumors slowly enlarged, the aneurismal whirr heard above the axillary one diminishing. His emaciation and cachexia progressed, and he died a few months later. Owing to unavoidable circumstances, I had lost sight of him, and no autopsy was obtained.

It is greatly to be regretted that no post-mortem examination was made in this case, to ascertain positively the condition of the viscera. In the absence of this, however, we may still be able to form a definite view of the nature of the disease. In the first place, there can be little doubt that the tumor in the right axilla was a cancer of the axillary glands. Were there no other evidences in favor of this view, it would be sufficient to refer to the age of the patient, to the rapid deterioration of health, to the marked cachexia, to the intense pain, and to the characters of the growth itself. It seems probable that the pulsation observed in it was partly due to its great vascularity, but was partly also derived from the axillary artery, with which the upper border of the tumor must have been in contact. In like manner, one explanation that I would suggest for the aneurismal whirr heard at the upper margin of the growth is that it was due to pressure upon the walls of this artery. Unfortunately, the brachial artery was not auscultated, to learn if the bruit was transmitted in that direction. The question suggests itself, however, as to the presence of an intra-thoracic aneurism. I confess that I am inclined to explain the thoracic symptoms upon the supposition that the mediastinal and bronchial glands had become the seat of cancerous enlargement, so as to press slightly upon the œsophagus, upon the right bronchus, and possibly also upon the innominate or right subclavian artery. The symptoms unquestionably pointed to the presence of some intra-thoracic tumor, and the existence of cancer of the axillary glands renders it highly probable that the deep cervical and intra-thoracic lymphatics were involved in the same disease. The systolic mitral murmur appeared to be hæmic in character, rather than to be due to any organic change in that valve. It is obvious that the view taken of the nature of the intra-thoracic tumor must influence greatly the opinion formed as to the nature of the abdominal tumor. The symptoms connected with this latter show it to have been a large pulsating mass occupying the postero-superior part of the abdomen, projecting posteriorly in the left lumbar region, and causing pressure upon the nerves of the lumbar plexus. This tumor was the seat of intense pain, and also caused severe sciatica from pressure on the nerves. Was it, then, a large aneurism of the abdominal aorta, or a cancerous mass? The absence of gastric derangement precludes the idea that the stomach was the seat of extensive cancerous degeneration, and the position and relations of the tumor are also opposed to the idea that either the stomach or the pancreas was the seat of the growth. It appears quite possible, however, to explain all the symptoms upon the supposition of malignant disease of the abdominal lymphatic glands, involving especially the glands on the left side of the vertebral column, and so forming a mass which might cause a projection posteriorly in the lumbar region, and which might readily have marked pulsation communicated to it by the abdominal aorta. It is also possible that the urinary symptoms may be explained, in part at least, by the pressure of such a mass upon the ureter of the left kidney. It must further be borne in mind that it is extremely rare to find an association of aneurismal and cancerous disease in the same subject, and that it is also rare for large aneurisms of the thoracic and abdominal aorta to occur in the same subject; while, on the other hand, multiple cancerous tumors may be expected when the lymphatic glands are the seat of malignant disease. It is, however, by no means my desire to pretend to establish a positive diagnosis as to the nature of the abdominal lesion, but only to suggest the view which appears most plausible and most in accordance with the general laws of pathology.

Finally, I would in this place merely call attention to the coexistence of *obstinate constipation* and *profuse sweating*, reserving any detailed remarks upon these symptoms until after a second case has been described, in which cancer of the abdominal glands was diagnosed before death and determined to exist by post-mortem examination.

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CASE II.—*Obscure abdominal pain; hydrocele; marked constipation; profuse sweating; emaciation and cachexia. Autopsy,—cancer of the abdominal and mediastinal lymphatic glands.*

Mr. H. was first seen by me in consultation with Dr. A. H. Smith, in the early part of January, 1870. He was 62 years of age, of large frame, with a pale but not sallow complexion, and but moderately emaciated. His occupation for many years past had been that of a dispensing druggist, and his habits were very sedentary. He had enjoyed uniform good health, with the exception of a tendency to constipation, until September, 1869. He then began to suffer pain in the region of the abdomen, which, he states, attacked him suddenly, after exertion, in the right lumbar region, and shooting round above the crest of the right ilium. After this time he was scarcely ever free from abdominal pain, although there were marked paroxysmal exacerbations of his suffering. At times the pain would be complained of in the right side, extending from the lumbar region around to the front. At other times it was most severe in the right iliac region, extending in the line of the groin; while again it was occasionally most severe over the lower lumbar vertebræ. The pain was at times extremely severe, sharp, and lancinating in character. It was always described as deep-seated.

The appetite continued fair, and digestion was well performed; no vomiting occurred, save on a single occasion after the ingestion of some indigestible food. There was, however, a marked increase in the constipation, which had been more or less habitual, so that now the daily use of strong purgatives secured only one large, firm passage at intervals of three or four days. The feces were rather dry, but were always of good color and well formed.

On several occasions during the last four months of his life œdema of the scrotum, of transient character, appeared; and for two weeks before his death there was slight hydrocele on the left side.

There was some enlargement of the lymphatic glands in the right groin, and, by deep pressure, enlargement could also be detected in the glands in the right iliac fossa. Deep pressure in this region, and also below the epigastrium, caused pain: the tenderness in the latter place only existed late in the case. No tumor could be detected in the abdomen. The liver extended about three-fourths of an inch below the margin of the ribs. No nodules could be felt over its surface.

There had been but moderate emaciation until six weeks before death, when he began to lose flesh rapidly. The surface was pale, the conjunctiva pearly white, and not the least trace of sallowness or cancerous cachexia was present. One of the most marked symptoms in his case was profuse sweating, which was as copious as in the last stage of tuberculous hectic. The perspiration was usually greatest during sleep, and was much more profuse than could be explained by the degree of debility present. The temperature of the surface was somewhat elevated.

The respirations were unaffected until near the close of the case, when occasional stridulous and prolonged expiration was noticed. The heart-sounds were healthy, and the pulse became frequent only as the debility grew extreme.

The urine was abundant, and passed without difficulty; it was of normal color, contained no albumen, and usually deposited a very abundant sediment of pink granular urates.

The diagnosis of the case was very obscure. The existence of serious organic disease of the abdominal viscera was eliminated by careful examination. The absence of vomiting, or of epigastric tumor, indicated that the stomach was not extensively diseased. The only evidences of hepatic disturbance which had ever been present consisted in a severe attack of pain in the region of the liver, followed by transient jaundice, some years before; and the absence of enlargement of the liver, and of jaundice or ascites, as well as the seat of the pain and the character of the stools, were opposed to the view that this organ was the seat of disease. The spleen was neither enlarged nor tender. There was no appreciable enlargement of the kidneys, and the urine, as already stated, was essentially healthy. The absence of vomiting, of fatty stools, and of tumor in the epigastrium, and the seat of the pain in the back, were opposed to the view of cancer of the pancreas. Finally, the absence of abdominal tumor, and of aneurismal murmur heard along the spinal column, either anteriorly or posteriorly, disproved the idea of an aneurism of the abdominal aorta. In addition to this negative evidence, there were the enlargement of the glands in the right groin, the deep-seated enlargement in the right iliac fossa, the passive hydrocele of the left side (due to pressure upon the spermatic vein), and the character and seat of the pains, which all indicated an enlargement of the abdominal glands along the spine, pressing upon the nerves issuing from the vertebral column about the lower dorsal and upper lumbar region. The age of the patient and the marked emaciation rendered it probable that this enlargement of the glands was cancerous in nature: so that the diagnosis arrived at was *cancer of the abdominal glands.* In this connection, I would again call attention to the presence in this case of *obstinate constipation* and *profuse sweating.* The treatment which had been employed consisted in the use of various purgatives, anodynes, and anti-spasmodics.

A few days after the above examination was made, the patient was seized with sudden and most acute pain in the lower part of the right thorax, which was increased by breathing or movement of any kind. At the same time there was repeated spontaneous vomiting of a peculiar curdy or cheesy-looking material; the bowels became somewhat loose, the stools being large—not more than two or three daily—and healthy in appearance, save that they were mixed with particles of whitish cheesy matter. The skin became more hot, the abdomen highly tympanitic, the pulse very frequent and feeble, and the respirations hurried and shallow. Physical examination revealed impaired movement of the lower part of the right thorax, with deficient resonance, though not actual dulness, on percussion, and feeble respiration, with coarse crepitus on auscultation. The patient had been confined to bed for several weeks, and there had been no exposure to account for this sudden inflammatory attack. He was put upon the use of stimulus, beef-tea, carbonate of ammonia, and quinia, but steadily sank, and died in a few days,—about five months from the first appearance of positive symptoms of disease.

Autopsy.—Head not examined.

Thorax.—Heart, pericardium, and aorta healthy. The left lung was healthy. On the right side there was about one quart of turbid serum in the pleural sac; the lower lobe of the lung was collapsed and dense, but not inflamed; and the lower portion of both the visceral and parietal layers of the pleura was coated with a thick layer of soft and œdematous recent lymph. The glands in the posterior mediastinum and some of the bronchial glands were much enlarged, and on section and microscopic examination presented the character of encephaloid cancer. The enlarged glands pressed upon the left bronchus, and thus explained the stridulous breathing which had been noticed.

Abdomen.—The liver was somewhat enlarged, its capsule opaque, and its surface indistinctly nodular. Upon section it was found to present the appearance of an early stage of cirrhosis. The gall-bladder was tightly adherent to the duodenum; its walls were also thickened, and its cavity contained about a dozen small and large calculi. The biliary ducts were pervious.

The spleen was rather small, and its trabecular structure somewhat increased.

The kidneys were flabby, congested, and evidently somewhat fatty.

The intestines were much distended with flatus, their walls thin and diaphanous, and the surface of the mucous membrane quite dry. The ileum and colon contained a considerable quantity of firm, dry, dark feces.

The glands in the right groin were enlarged, and on section presented an encephaloid appearance. The same condition was found in the glands in the right iliac fossa. The lymphatic glands along the spinal column were also the seat of encephaloid cancer, and at the lower dorsal and upper lumbar region formed a flat mass about four inches in width and two inches in thickness, extending on either side of the vertebræ. This mass was composed of enlarged and cancerous glands; it was so tightly adherent to the anterior surface of the vertebræ as to require the use of a scalpel to separate the adhesions. The pancreas was also closely adherent to and partly imbedded in this cancerous mass; but upon careful dissection it appeared that the disease had not actually invaded the gland-

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tissue. The aorta and vena cava were also closely adherent to the cancerous glands. The circumstances under which the autopsy was made prevented a minute dissection of the parts; there can, however, be no question but that the solar plexus was involved in or encroached upon by the disease.

Microscopic examination of the enlarged glands showed the characteristic appearance of encephaloid cancer.

These two cases have been reported thus in detail, partly on account of their clinical interest as examples of a rare form of cancerous disease. The chief object, however, in placing them together is because they both presented the peculiar combination of obstinate constipation with profuse sweating in connection with abdominal tumor. The degree of sweating in both of these cases was quite remarkable, exceeding even that which attends the hectic fever of tuberculosis, and certainly most unusual in the course of cancerous disease. It is necessary, therefore, to search for some condition, peculiar to these cases, which may serve to explain this phenomenon. The one feature which they present in common is the existence of a tumor lying deeply in the upper part of the abdomen, in contact with its posterior wall. In the second case, this tumor was demonstrated to be a cancerous mass, formed by the abdominal lymphatic glands, and in such a position as necessarily to have involved to a more or less complete extent the great solar plexus of the sympathetic nerve. In the first case, although, owing to the want of post-mortem examination, there may be some doubt in regard to the exact character of the abdominal tumor, the seat of the mass must have been such as to have caused pressure upon a portion at least of the solar plexus.

We are, it is to be trusted, becoming more accurately acquainted with the control exercised by the abdominal sympathetic over the relation which exists between the vascular and secretory condition of the skin and that of the intestinal mucous membrane. There is but little doubt that in all choleraic conditions, whether in true cholera or in the analogous states produced by some irritant poisons or drastic purgatives,* the profuse serous flux from the intestines, on the one hand, and, on the other, the cold, pale, and shrunken cutaneous surface, are due to a paralysis of the abdominal sympathetic nerve from over-irritation of its peripheral branches distributed to the intestine. The obvious result of such a paralytic condition would be an extreme dilatation of the vessels of the intestinal mucous membrane, with a profuse serous discharge. This explanation of the pathology of choleraic collapse was advanced by Rilliet and Barthez; it has also been ably supported by Sedgwick (*loc. cit.*) and by Jeaffreson,† and is the view that Dr. J. F. Meigs and myself have adopted in our article on Cholera Infantum.‡ That paralysis of the intestinal branches of the abdominal sympathetic is followed by profuse serous flux, is confirmed by the experimental researches of Moreau,§ who found that, after section of the intestinal nerves in animals, a copious secretion of alkaline serous fluid took place into the bowels. Some doubt may exist as to the exact relation which subsists between the serous flux from the bowel and the state of the skin in choleraic conditions, as to whether the latter becomes pale, shrunken, and cold owing merely to the drain of fluid from the blood, or owing to irritation of the branches of the sympathetic nerve, transmitted from the abdominal ganglia, causing contraction of the arterioles of the skin. In all probability, however, both of these influences are active in such cases and aid each other in the production of the phenomena.

The direct influence of the sympathetic nerve over the vascular supply of the skin and the amount of perspiration is also shown in cases of severe injury or section of the cervical portion of the spinal cord or of the cervical sympathetic, where, in addition to the changes in the pupils and in the temperature, and the production of congestion of the face, abundant sweats have been noticed.‖ In endeavoring to explain the phenomena in the cases above reported, the idea has suggested itself that the most peculiar of the symptoms, the combination of profuse sweating with obstinate constipation, might be accounted for by the fact that the ganglia of the abdominal sympathetic were more or less involved in the disease, and that, consequently, their activity must have been modified. It seems, however, difficult to apply this supposition satisfactorily. It may indeed be readily understood that in choleraic conditions the fibres of the sympathetic distributed to the intestines should be temporarily paralyzed from exhaustion of their excitability, whilst a much less degree of irritation should be transmitted to the fibres governing the calibre of the arterioles of the skin. But it is more difficult to imagine a condition in which the portion of the abdominal sympathetic distributed to the intestines—and, in my first case, to the kidneys—should be the seat of such irritation merely as would cause a diminution of the watery part of the secretions of these organs, while the vessels of the skin should be relaxed so as to allow a profuse flow of sweat. Was there a condition of reflex paralysis of the vaso-motor nerves of the cutaneous vessels? or did the profuse sweating occur merely as a vicarious discharge? I confess that I incline strongly to the former view. Certainly this supposition of some reflex connection between the state of the abdominal ganglia and the cutaneous vessels would be rendered far more probable if the first patient's assertions are to be credited (and I know no reason for doubting them) as to the remarkable fact that, when lying on either side, there would invariably occur in a few minutes profuse sweating, accurately limited to the upper side of the body, while the lower side (in contact with the bed) would become dry. I am not aware that this peculiar feature has ever been noticed before in this connection, or, indeed, that the special symptoms to which attention has been devoted in these remarks have been observed in cases of abdominal tumor. It is quite possible that, in the cases here reported, they may have been due to some unappreciated cause, entirely distinct from that to which I have been disposed to attribute them. The cases are offered, however, as a trifling contribution to one of the most interesting and obscure questions of modern medicine,—the pathology of the great sympathetic nerve.

TRAUMATIC RUPTURE OF THE URETHRA,

RECENT AND CHRONIC.

BY WILLIAM HUNT, M.D.,

One of the Surgeons to the Pennsylvania Hospital.

IN cases of perineal section or external perineal urethrotomy for the relief of stricture, it seems now to be settled by competent authority that the retention of the catheter for any length of time after the operation is not only useless, but may be followed by most disastrous results.

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* See Sedgwick's article "On some Analogies of Cholera," in *Med.-Chir. Trans.*, vol. ll., 1868, p. 1.

† *Edinburgh Medical Journal*, December, 1866, p. 520.

‡ Meigs and Pepper on Diseases of Children, 4th ed., 1870, pp. 383-387.

§ *Comp. Rend. de l'Acad. des Sciences*, t. 66, p. 554, 1868, in *Med. Times and Gaz.*, April 11, 1868, p. 397.

‖ Among other articles which may be consulted in regard to this point, the following may be especially referred to:

M. Rendu, Sur les Troubles fonctionnels du grand Sympathique observés dans les Plaies de la Moëlle cervicale.—*Archiv. Gén. de Méd.*, Septembre, 1869, p. 286.

R. Bartholow, M.D., Unilateral Sweating of the Head: its Relation to Disorder of the Sympathetic System.—*Amer. Jour. of Psych. Med.*, January, 1869, p. 134.

William Ogle, M.D., A Case illustrating the Physiology and Pathology of the Cervical Portion of the Sympathetic Nerve.—*Medico-Chirurgical Transactions*, vol. liii., 1869, p. 151.

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How far the disastrous results are to be attributed to the stated cause is doubtless questioned by many; for all surgeons of large experience know that the bladder and its appendages are treacherous organs to deal with surgically, especially where the subjects of interference, as is most frequently the case, have been victims of chronic trouble brought on by dissipation or neglected accident.

With such the local difficulty is by no means the only source of anxiety, but too often there is a certain uræmic cachexia present, which adds very materially to the gravity of the prognosis. Is it any wonder that such as these should sometimes succumb to attacks of surgical fever? And is it not too much to say that the fatality is due to an error in practice which, whether so or not, has been made and advocated for many years by most distinguished surgeons? Even persons otherwise most healthy have been attacked with rigors after the simplest introduction of an instrument into the bladder, and I believe cases are on record where death has followed the operation.

Certain unpleasant local consequences are known to have followed from the prolonged retention of instruments in the bladder, but, from a very ample experience in a great variety of cases, I am prepared to say that I believe that the intolerance of that organ and the urethra to instruments has of late been greatly exaggerated. I know of one case where for four years, through shame, a boy carried *three and a quarter inches* of a broken and jagged glass stem of a thermometer in his bladder. He suffered locally only, and finally revealed the cause of his difficulties, and was completely relieved by the operation of lithotomy.

But, whether the consequences of retaining instruments is exaggerated or not, the "cui bono" must settle the question. It is sufficiently shown that in the operations on chronic cases it is not necessary.

The procedure, if it does not interfere with, at least does not help to, a favorable result; in most cases it seems to be useless,—many surgeons consider it injurious; and therefore the practice should be abandoned.

It is not so easy to settle the question as to what course to pursue in regard to the retaining of instruments in *recent* traumatic rupture of the urethra, should the surgeon be so fortunate as to gain access to the bladder by the natural passages immediately or very soon after the reception of the injury; and it is to contribute something to such an inquiry that the present paper is written.

Sometimes in the Pennsylvania Hospital a year will pass without a single case of accidental rupture of the urethra being admitted; but during my term of service of six months, now about to close, no less than *eight* cases of this serious injury, recent and remote, have come under my notice. Four of these cases I saw from the very beginning, three of which were under my immediate treatment. The others were in various stages as to time, but *all* were of the traumatic order.

Case I.—W. P., æt. 21, admitted April 7, 1870, into Dr. A. Hewson's wards. He had been very severely gored by a bull about thirty-six hours before admission. The perineum, the adjacent surface of the right thigh, the under surface of the penis at its scrotal junction and about two inches forward in the median line, were greatly lacerated. Infiltration had taken place into the perineum and scrotum, and at the same time the bladder was enormously distended. Attempts had been made, before his admission to the hospital, to introduce instruments into the bladder, but without success. A few trials in the house also demonstrated their futility, and free incisions were made in the perineum and scrotum. A flow of dark blood and some urine followed; but the bladder remaining unrelieved, and it being night, Dr. Hewson punctured it above the symphysis and secured the canula in position. Of course there was great shock from the beginning, and the prospect of the patient surviving the immediate effects of the injury was very doubtful.

The next day, the patient having reacted, external perineal urethrotomy was performed by Dr. Hewson, and a catheter was passed into the bladder, and retained, being withdrawn at varying intervals for cleansing. It is not my intention to give a full history of these cases, but merely to quote them as illustrating the points under discussion. This patient is still in the house (January 25, 1871), but expects soon to leave. I took charge of him August 1, 1870. Great sloughing, immediately following the injury, had of course occurred. There was hypospadias. A small amount of urine and much pus was passing by the supra-pubic opening. A large but healthy ulcer was on the inner surface of the right thigh. There were perineal fistulas, from which urine was discharged, but most of it escaped from the posterior end of the split urethra at the scrotal junction.

No very material change was made in treatment by me The patient's general health has improved, and with the improvement the ulcers and fistula close sometimes, again to open; but there is an almost complete control over the bladder, the patient being able to hold his water for two hours. He is up and dressed, and moves about freely. A consultation was held with my colleagues as to the expediency of further operative interference, but it was decided not to touch him, at least at present.

Now, here is a case where I believe the first efforts of Dr. Hewson saved life. The conditions afterwards, excepting the supra-pubic opening, were all incident to the injury. Yet by some, unacquainted with the history, they might be attributed to points in the instrumental treatment.

Cases II., III., and *IV.* came under my care almost immediately after the reception of the injuries.

Case II.—D. O. D., æt. 13, was standing (April 18, 1870) on the head of a barrel, when it gave way, and he fell, striking the perineum on the staves. Dr. Getchell was the attending physician, and, seeing the nature of the injury, called me in consultation. There was rupture of the urethra, the scrotum and perineum were infiltrated, and the bladder distended. A catheter-point passing the anterior seat of laceration could be thrown anywhere about the perineum at will.

The patient was etherized thoroughly, and, placing him squarely on his back, I had the good fortune to introduce a full-sized catheter into the bladder. I then incised the scrotum freely. The catheter was secured, and was kept in position for eight or ten days, having been removed but once during that time. The case progressed so favorably that the surgeons were evidently looked upon as designedly exaggerating the seriousness of it; and on about the tenth day the catheter came out as the bowels were being open after a dose of oil.

The urine flowed freely through the urethra, and the boy was considered well by his parents, who, having a wholesome dread of fees, sent word to me to discontinue attendance, notwithstanding the warnings given.

The boy was a very unruly customer, and determined to have his own way. Early in June I received a note from Dr. Hewson asking me to see a case of perineal abscess in a boy at the hospital. On going into the ward I recognized my little *gamin*. The abscess communicating with the urethra was, I think, merely opened by Dr. Hewson, and no extended section was reqtired. Instruments were used, and a flexible gum catheter could be worn and retained.

August 14.—Passes a good stream, and No. 6 bougie readily enters the bladder. For most of the time since the operation by Dr. Hewson a flexible bougie has been worn.

August 17.—Fistulous opening nearly closed; no water passes from it. Discharged, to come to the house twice a week to have a bougie introduced.

In October, the patient, having paid no attention to the directions, appeared again, now suffering chiefly from incontinence, but the water all passing by the urethra. This at first would admit but a very small bougie; but the stricture was rapidly dilated, the incontinence disappeared, and the boy was discharged, again, I suppose, to neglect himself and suffer.

Case III.—E. N., æt. 28, admitted August 2, 1870. A carpenter by trade. While working on a building, he fell,

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striking the perineum on the edge of a scaffold-board. He went twenty miles out of town after the accident, not knowing its serious nature, for the bladder must have been empty at this time, although there was considerable swelling. He found that he was unable to pass his water. His surgeons did not succeed in introducing an instrument, not having a good supply, and advised him to go back to the city and to enter the hospital. He was admitted about thirty hours after receiving the injury. The bladder was greatly distended. There was rupture of the urethra. The perineum, penis, and scrotum were swollen and ecchymosed.

Placing him squarely in position, and without waiting to etherize, I at once succeeded in passing a full-sized gum catheter into the bladder. On the 4th I incised the perineum over the seat of an abscess, pus and blood being freely discharged,—the catheter being kept in its place, where it remained for eleven days. It was then removed and a silver one substituted, which could be easily introduced and withdrawn. In the mean time the swelling had subsided, and the abscess healed.

This case did so well that the patient was discharged on August 31, 1870, having learned how to take care of himself, and promising faithfully to do so.

He reported early in January, 1871, and stated that a No. 7 bougie passed easily, producing a slight stinging sensation as it went by the seat of rupture. His water is voided naturally, —no frequency of micturition or incontinence. When he crosses his legs while sitting, a slight pain darts through the perineum, to remind him of his trouble, and to admonish him as to the continuance of the use of the bougie.

During his stay in the hospital he was a very sick man, but his present condition is excellent.

Case IV.—J. H., æt. 23. Admitted August 6, 1870. Fell, twenty-four hours before, on the edge of a board from a height of seven feet, striking the perineum. Scrotum greatly distended and nearly black; perineum bulging downwards; penis contused; bladder full. Great shock. An instrument in the urethra could be thrown anywhere about the perineum; but, as in the other cases, after placing the patient in position, I passed a medium-sized catheter without much difficulty into the bladder. I then incised the scrotum on both sides very freely. The catheter was retained and opium suppositories given.

On the seventh day a large abscess was opened in the perineum. There were repeated chills, preceding abscess formations, the symptoms in every case subsiding on the evacuation of the pus and urine; these abscesses, except one at the peno-scrotal junction, were not on the line of the instrument, and all were the result of the destruction by the original injury and the subsequent infiltration.

August 25.—The catheter has been removed from time to time, is cleaned, and returned with ease. Some urine mingled with pus flows from the perineum.

September 3.—The abscess opened at the scrotal junction; the perineal abscess has closed. Small abscesses have appeared successively in the perineum and scrotum, evidently from the bruised connective tissue, as they discharge pus without urine.

17th.—The continuous use of the catheter abandoned. Patient can now pass it himself, and is ordered to do it every day. There is a small urethral fistula at the scrotal junction. Patient up and about the wards, making himself useful.

November 19.—An operation was performed to try and close the only urethral fistula remaining at root of penis. The edges were pared and brought together, and a catheter introduced for a short time. The good effects of this and another attempt were frustrated by frequent erections, which were not controlled by opium or bromides; but the opening contracted to a very small point, and was easily managed by the finger when the patient urinated, so that all the water was discharged by the natural orifice.

Discharged December 14, 1870. Reported middle of January, 1871. Condition: no fistulous openings in perineum. Passes No. 8 bougie. The fistula at root of penis more contracted, but still open, though easily controlled by the finger. General health excellent. Admonished to continue use of instrument.

The next four cases, with the exception of the first one, entered the hospital a long time after the reception of the original injury, and afford a good contrast as to condition.

Case V.—J. W., æt. 16. Healthy until about middle of May, 1869. Fell a distance of about three feet,—from the roof of a house on the ridge of a board fence,—striking on the perineum. He states that at first he felt but little pain, but soon after felt an inclination to straining without being able to void his urine.

He came directly to the hospital, where he was put to bed, the contusion dressed, and his urine drawn off by means of a catheter. The next morning the catheter was again introduced, but in the evening it was found necessary to administer ether before the operation could be successfully repeated. For six weeks after, the catheter was daily introduced without the use of anæsthetics. At the end of that time he was instructed to use it himself, although he could void his urine without its employment.

Some abscesses formed as a result of the contusions received; these were opened from time to time, but no perineal section has at any time been performed.

He was discharged, but re-entered the hospital on March 23, 1870, suffering from a new abscess of small size, and the easy and daily introduction of a catheter recommenced. It was disused after his discharge from the hospital, and he applied for admission the third time with perineal abscess and incontinence. He was placed under a system of dilatation, and rapidly grew better, being now able to introduce for himself a No. 7 bougie.

Case VI.—G. W., æt. 19. In July, 1867, this patient fell from a load of hay and struck his perineum on a gate. According to his account, there was swelling, some blood flowed from the urethra, and he was unable to pass urine. Infiltration and subsequent fistula followed. About a year afterwards (July 25, 1868) he was admitted to the hospital. His condition was so generally miserable that dilatation alone was resorted to, and he left the house in September, partially relieved.

He improved very much in health by going to the country. Was readmitted in March, 1869, and Dr. Agnew performed perineal section with entire success. He remained in the house seventy-two days, and was discharged able to pass No. 14 bougie. He neglected himself; stricture formed, and fistulas followed.

Again admitted May 25, 1870. Dr. Hewson performed perineal section also with success, and when I took charge of the wards, in August, the patient was passing a flexible catheter and going freely about the wards.

Discharged November 8, able to pass a No. 7 bougie. There is a well-founded hope this time that past experience will prevent neglect.

The case is instructive, as to the constant tendency to recurrence of trouble if care is not duly exercised.

Query.—Do the changes of youth tend more to stimulate this recurrence than in those of more mature age?

Case VII.—J. D., æt. 17. Admitted June 20, 1870. This was an old subject of the trouble. Was injured seven years previously by a kick in the perineum. Passed blood at the time, and has had some difficulty in voiding his urine ever since, but had no need of operative assistance until last March. An abscess and urinary fistula formed. The treatment was dilatation. The fistula closed, and patient was discharged November 11, 1870, able to pass a fair stream of urine and to introduce a No. 2 bougie. Has since reported himself. General health much improved, and manages his urethra and bladder without difficulty by continuing the use of the bougie frequently.

Case VIII.—J. C., æt. 27. This is a patient now in the hospital, who will be the subject of further consultation.

In December, 1870, he was caught between coal-cars while coupling them. Severe contusions of the thighs, hips, and perineum were the consequence. The bladder was distended with urine, and, under chloroform, it was relieved. This was repeated for twelve days, after which time he was able to void

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urine without assistance. The patient soon noticed a swelling on the right thigh, about three inches below the raphé of the perineum. After poulticing it broke out, and proved to be a urinary fistula.

On September 30, 1870, he was admitted to the hospital, and was found to have tight strictures almost continuously throughout the urethra besides the fistula. The urine passed partially both ways. As the anterior strictures were permeable, systematic dilatation was pursued, in order to fit the patient for perineal section, to relieve the posterior difficulty.

Advance was made so that a large instrument could be passed through the front obstructions; but about this time symptoms of pyæmia (irregular chills, fever, etc.) set in, and the patient was advised to leave the hospital wards for the present, and to return when his health improved.

Readmitted January 4, 1871, in very good general health. The anterior strictures, which had contracted somewhat, are being again dilated, and the patient awaits further treatment.

This, then, is my experience so far in the cases that have occurred during my term of service. Some of them will require further operative interference, and if the fortunate ones neglect themselves, they too will doubtless need the knife.

In all the acute ones, and in those that were operated upon, the instruments were retained for varying periods; in none was there a mishap that could by any observer be attributed to the catheters or bougies. Yet one might thus argue, should he see some of them at present, without knowing their history,—No. 1, for example, who had the under surface of his penis torn almost from root to glans, or No. 4, whose scrotum, penis at the scrotal junction, and perineum were almost jet black with effused blood and infiltration, and in whom, although most of the skin was saved by free incision, there were very extensive sloughs of the connective tissue.

But, say some, the retained instrument *may* do harm; therefore it should be withdrawn at all hazards. It seems to me that these cases are entirely different from those of chronic disease. I am open to conviction, and trust that the *Times* will freely lend its columns to this important subject. I must confess that at present, if I get through a broken perineum into the bladder, I feel inclined not to let go my hold, but to remain there for a little while at least, for all surgeons know that "for ways that are dark" a ruptured urethra "is peculiar."

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

MEDICAL CLINIC, SATURDAY, JANUARY 14. SERVICE OF DR. DA COSTA.

Reported by Dr. J. C. Wilson, Resident Physician.

PNEUMOTHORAX OCCURRING IN A CASE OF PHTHISIS.

DR. DA COSTA exhibited to the class specimens removed from the body of a patient who had died in the ward, a few days previously, of phthisis. The history of the case was briefly as follows.

William Nary, aged 21, born in Philadelphia, a factory-hand, unmarried, was admitted to the hospital November 1, 1870. Both parents and all his brothers and sisters died of phthisis. His own general health has always been poor; he has been thin and pale, and suffered from palpitation of the heart; during the past three years has suffered from chronic coryza. He dates the beginning of his sickness from last May, when he caught a severe cold. Cough has been present ever since. In July he was compelled to give up work. Never had spitting of blood. Is tall and very thin; chest exceedingly narrow. There is marked clubbing of fingers. Cough troublesome; expectoration puruloid; some soreness of fauces; no thoracic pain; hectic and night sweats constant and distressing; appetite fair; bowels constipated.

On admission, the physical signs indicated extensive deposit in left lung, without cavities, and deposit at right apex. There was no disease of the heart. He was placed upon suitable treatment, attention being directed especially to the sweating, and was ordered good diet.

His condition became steadily worse, the cough more troublesome, the expectoration more abundant; and, although the sweats, uninfluenced by other remedies, appeared to be controlled by atropia, he lost appetite, vomited occasionally, and soon began to suffer from dyspnœa on slight exertion. A careful examination of his chest was made regularly at intervals of three or four days, but no signs of a cavity were detected until the ninth day before death, although there were indications of deposit throughout left lung, and of an increase of that in the right. Three days before death he was seized suddenly with sharp, shooting pains in the right chest, accompanied with distressing shortness of breath, which was aggravated by lying down. The percussion note over base of right chest, both anteriorly and posteriorly, was markedly clear and of high pitch; there was absence of vesicular murmur, but in its place amphoric breathing, and a distinct amphoric echo, of metallic tone, in coughing. Subsequently a distinct gutta cadens was heard, and on the night of the 12th the man died.

At the autopsy, the right pleural cavity was found to be distended with air. It contained about a pint of sero-pus, and both surfaces were covered with recent plastic lymph. Right lung compressed to about fourth rib; its upper third tightly adherent to chest-walls. A minute opening was discovered in the pleura at lower part of upper lobe anteriorly. On section the right lung found to be moderately infiltrated with recent and cheesy tubercle. The upper lobe contained two small cavities the size of a chestnut.

An enormous cavity occupied the apex of the left lung. This was as large as the fist, and equalled fully one-half of the upper lobe; its walls were about two lines in thickness, and it was about two-thirds filled with fluid of the consistence of thin gruel. The remainder of the lung was packed with softening tubercle, which wholly took the place of the vesicular structure. At two points softening had given rise to small cavities in addition to that at apex.

This is the third case of phthisis during the present term of service in which death has been preceded by pneumothorax. The condition is readily recognized. The sudden occurrence of dyspnœa, with pain of pleuritic character, and the marked change in the physical signs to which it gives rise, together with the position of the patient and his intense distress, render the diagnosis plain. This man's sufferings were somewhat alleviated by small doses of deodorized tincture of opium, frequently repeated, and free stimulation. Another point of interest in this case was the rapid formation of the immense cavity at the left apex, and the obscurity of its signs. The only sign indicating its existence at any time was cavernous respiration, and this was not heard until the ninth day before death.

WALKING CASE OF TYPHOID FEVER.

George Illidge, West Indian, aged 17, an apprentice, was admitted January 7, 1871. This boy became ill three weeks before admission to the hospital. He began to feel weak and miserable; was feverish; had chilly sensations towards evening; lost all appetite; had severe frontal headache; pain in back; sleeplessness. Had no bleeding at the nose, no abdominal pain, no diarrhœa, but, on the contrary, a tendency to constipation. He had no medical treatment, *and continued to work at his trade as coppersmith until he came to the hospital*, though frequently obliged to "knock off" for a few hours from sheer weakness.

When first seen, was very weak; countenance anxious, and expressive of debility; mind clear; was deaf, but had no tinnitus aurium; had lost flesh greatly; tongue red at edges and tip, but covered with white fur in centre; abdomen rather large; he is slightly constipated; some pain on pressure in right iliac fossa; ten or twelve large, well-marked rose-spots on abdomen and lower part of chest. He has an occasional slight cough.

January 8, A.M.—Pulse, 81; resp., 24; temp., 100.5°. P.M.—Pulse, 90; resp., 24; temp., 103.5°.

The treatment in this case has consisted simply of rest in

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bed, concentrated liquid diet, and a small quantity of wine. Fresh spots have appeared in crops, but they are now fading, and there is great improvement in the patient's condition. Convalescence is evidently beginning. Though his bowels were constipated, ʒij of castor oil produced repeated movements.

These walking cases of typhoid fever are not very uncommon, and, though they are usually mild as regards the character of the disease itself, they often lead to a fatal termination. This is no doubt due to the fact that the patient, unaware of his condition, continues to move about, to expose himself, to eat such food as is presented to him, as usual. He suffers more from the want of the physician's warning and advice in regard to such matters as these than from the want of medicine. There appears to be a tendency in cases of typhoid fever occurring during a given season in the same locality, to present the same general characteristics,—that is, to conform to a special type in some measure. This type varies in different seasons. The cases that have come under observation in this house during the last three months have presented a remarkable instance of this. They have all been of mild character, without marked head-symptoms, and without diarrhœa as a prominent symptom; while they have, at the same time, exhibited in every case the rose-colored spots over the chest and abdomen, in small numbers, but of unusually large size.

January 21.—This patient again brought before the class. He is fully convalescent. The spots have disappeared, and his temperature has been normal for several days. Several small abscesses have appeared in different parts of the body. This is not uncommon in the convalescence from low fevers. The patient is now taking tr. ferri chloridi gtt. xx, q. q. h. The pus must be freely evacuated. He now takes solid food, and sits up part of every day.

CASE OF RE-AMPUTATION AT THE HIP, WITH REMARKS ON THE OPERATION.—Assistant-Surgeon Geo. A. Otis, U.S.A. (*American Journ. Med. Sciences*, January, 1871), narrates the case of Julius Fabry, a United States soldier, who underwent primary amputation of the left leg on August 16, 1864, for gunshot injuries. A second amputation, viz., through the knee-joint, followed on the 23d of August, which, in turn, was succeeded by resection of the protruding condyles in the following December. From this time the thigh (Fig. 1) pre-

Fig. 1.

sented the ordinary appearance of necrosis of the shaft of the femur following amputation, and for which—May 15, 1870—nearly five years after the date of the first amputation, disarticulation of the femur was performed by Assistant-Surgeon Otis.

In consequence of the mass of involucrum anteriorly approximating nearly to the groin, it was deemed best to secure the anterior flap by cutting from without inwards. A long, semilunar incision was accordingly made from a point on the tuberosity of the ischium to a point midway between the anterior superior spinous process of the ilium and the trochanter major, dividing the skin and subcutaneous tissue, and the flap was then rapidly dissected and reflected to within a hand's-breadth of Poupart's ligament. Then, with a single sweep of the knife, the muscles of the inner and anterior part of the thigh were divided and the joint laid open (Fig. 2).

Fig. 2.

The coats of the main vessels were soft, and some delay was caused before they were properly secured. The operation was then completed by connecting the angles of the first incision by a horizontal cut through the gluteals and the division of the remaining articular attachment. The parts were found to coaptate perfectly. No untoward symptom of importance followed. Fabry was about by the twenty-first day, and subsequently entirely recovered. The stump was dissected, when it was found that the entire shaft of the femur was necrosed and enveloped in an enormous involucrum (Fig. 3).

Fig. 3.

The author concludes by a brief summary of all the recorded cases of re-amputation at the hip-joint, amounting to twenty-one. Of these, fourteen, or sixty-six per cent., were successful; so that the conclusion would appear to be that in incurable disorders of thigh-stumps, resulting either from injury or disease, disarticulation at the hip is the proper remedy. Dr. Otis recommends, as a prothetic apparatus for the survivors of this operation, a gutta-percha artificial stump nine or ten inches in length, firmly strapped to the pelvis by a broad chamois-lined canvas band, to which an ordinary artificial limb for thigh-stumps can be attached.

UTERINE INERTIA OVERCOME BY MANUAL DISTENTION OF THE PERINEUM.—Dr. Van der Meersch (*L'Union Médicale*, May, 1870), having noticed that the distention of the perineum by the child's head, or of the vulva by the forceps, produces reflex uterine action, has employed a method which induces like results. Towards the end of labor, when the pains grow feeble or complete inertia takes place, he introduces the two fingers as far as the head of the child, separates them as widely as possible, applies their tips to the posterior vaginal wall and slowly draws them down to the external opening, which he distends as much as possible by pressure on the posterior commissure. He claims repeated success for this simple method.

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THE MEDICAL TIMES.
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WEDNESDAY, FEBRUARY 15, 1871.

EDITORIAL.

THE BOARD OF PUBLIC CHARITIES.

BY an act of Assembly, dated 24th April, 1869, the Senate and House of Representatives of the Commonwealth of Pennsylvania authorized and directed the Governor of the State to appoint a Board of Public Charities. This board was to consist of five commissioners, together with a general agent and secretary. After some delay in organization, the following gentlemen were finally appointed to fill this highly responsible position: Messrs. Hiester Clymer, Charles A. Woods, George L. Harrison, George Dawson Coleman, and Thomas L. Kane. Mr. Kane was elected President of the Board, and Dr. Wilmer Worthington was appointed General Agent and Secretary.

The duties and powers of this board were defined with considerable detail. The commissioners are required to publish a full annual report, "embracing all the respective proceedings and expenses during the year, and showing the actual condition of all charitable and correctional institutions within the State, with such suggestions as the board may deem necessary and pertinent." They are also required to consider all applications from charitable institutions for State aid, and to state in the annual report their opinions of such applications. To enable them to discharge these duties, the Legislature vested in this board full visitorial powers, and also authorized them to call upon the superintendents of all charitable or correctional institutions for an annual report "of such facts and statements concerning the same as may be required." No less comprehensive powers could enable such a board to discharge satisfactorily the task set before it; and when this act was finally approved and the commissioners appointed, we felt that a brighter day was dawning for the almshouses, asylums, and prisons throughout our commonwealth. Seven months have passed since the organization of the Board of Public Charities was completed: the Commissioners have, perhaps, taken no very radical step towards reforming any abuses they may have discovered, but there have already been frequent indications that a good work was going quietly on under their efforts, and we were looking forward with interest for the publication of their annual report, which might be expected to afford much valuable information. It caused us no little satisfaction, then, at first, to receive a small pamphlet bearing date of 16th January, 1871, and entitled "A Report from the President of the Board of Public Charities." But what was our surprise at finding that, so far from even pretending to meet the requirements laid down by the act of Assembly for the annual report, this paper is issued without the consent or even the cognizance of the commission, and is, from beginning to end, a mere tirade against the board, interlarded with fragments of sage advice to the Legislature upon the true scope of public charity, and the duties of the Representatives in regard to this important subject!

The Commissioners are charged with neglect of duty, with disobedience to instructions, with inactivity and incompetency. Even the disinterested and public-spirited zeal which they have exhibited in gratuitously devoting themselves to the discharge of their duties is made the occasion of a most ill-placed sneer at them as "gentlemen of independent means," who "are placed above the people only by their not laboring under the necessity of working for their daily bread." It ought, however, to encourage these unfortunate gentlemen to find that, although they have shown themselves most signally inefficient when serving in such an independent position, Mr. Kane still thinks so well of them as to "hardly entertain a doubt" that they would make passably good clerks, if well watched by an exacting chief. From the general tenor of his report, however, we should advise them, should they ever find themselves under the necessity of seeking such a clerical position, to look elsewhere before applying to Mr. Kane for a recommendation. Indeed, the president appears to have lost all patience with his colleagues; so much so that, having punished them sufficiently by his sovereign and sweeping censure, he calls upon the Legislature to abolish the Board of Public Charities entirely.

If it were not for Mr. Kane's position as president of the board, and the apparent authoritative character of the present report, the ill nature and discourtesy which are its main characteristics might have provoked a momentary feeling of irritation, but would have merited no further attention.

We can, indeed, scarcely believe it possible that the Legislature will accord any consideration to this proposal; and yet such is the paramount importance of this board that we feel ourselves constrained to add our utterance to the public voice which has already spoken unmistakably in its favor.

No one familiar with the operation of any great hospital, almshouse, or prison can fail to be painfully conscious that, despite the most attentive care on the part of the managers and officers, grave abuses are apt to creep into the administration of its affairs. Experience has shown that this is very apt to occur even in those public institutions seated in the midst of large and highly-cultivated communities, where we might expect so close and constant a scrutiny would be exercised as effectually to prevent any such result. But what check can the Commonwealth have upon the mode of management of those institutions which are seated at a distance from large cities, and where the officials in charge are rarely troubled by inquisitive committees or visited by

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reporters for the public press? The proper scrutiny in all such public institutions can be exercised and secured only by the existence of a special board, vested with full visitorial powers. In no other way, further, can the Legislature obtain any reliable data to guide them in the important duty of voting appropriations to the various public charities. It seems superfluous to utter a single word in explanation of the absolute necessity of such a commission; the only regret is that Pennsylvania should have been so long behind other States in establishing it. Upon what grounds, then, can a man so well known for his philanthropy and high cultivation as the Hon. Mr. Kane possibly lend himself to opposing the maintenance of a board capable of effecting untold good in the cause of humanity? Assuredly not because he fails to appreciate the inestimable advantages which would be secured by its operations. No, we regret to say that the only argument which he advances in support of his recommendation is one based upon the alleged short-comings of his own colleagues in the present board. What, then, is the truth in the matter? Is this board composed of men so little fitted for the discharge of the duties of the position, and who have shown themselves inactive and neglectful? We believe we only state the general feeling of the community in saying that the choice of these gentlemen by the Legislature appeared most judicious. Their character for intelligence and benevolence is known to all; and the very peculiarity in their position—as "gentlemen of independent means"—which points one of Mr. Kane's most vigorous rebukes, appears to us to be one of the chief elements of the great strength and efficiency of the board.

From whom are we to expect the most outspoken reports as to the condition of public institutions, the most fearless exposure and censure of abuses, the most bold and uncompromising advocacy of reforms, the most impartial and unbiassed recommendations for appropriations? From officials depending for their means of livelihood upon the salaries connected with their positions, which they hold by the uncertain tenure of personal favor or political influence? It seems to us indisputable that if devoted and self-sacrificing men can be found willing to undertake the work who, in addition to energy, intelligence, and practical ability, are so richly blessed with this world's goods as to be beyond the necessity of a salary for their labors, and therefore beyond the fear of losing their appointment, we will most assuredly secure the desired result. These men do not seek or require the position; communities should rather feel that such positions need their services.

We are glad that the Board of Public Charities has not remained silent under the imputations cast upon them; and in an able memorial, addressed to the Legislature, dated 21st January, the various statements of the president are temperately but most forcibly refuted. From this we learn that the degree of inactivity shown by the board consists in having carefully and thoroughly inspected twice within twelve months all the "State institutions;" in having travelled many thousands of miles to visit these prisons, almshouses, and hospitals, and in having, as we can testify from personal knowledge in some cases, given careful study to their mode of management, offered valuable suggestions for the removal of defects or the securing of greater efficiency, and followed up these suggestions by laborious efforts to obtain the improvements indicated.

Their disobedience to their instructions to prepare an annual report appears to consist in having presumed to suggest some modifications of a report drawn up by the president without the aid or co-operation of any other member of the board. In short, we can only conclude that the real source of Mr. Kane's dissatisfaction with the board is the unwillingness of his colleagues to adopt his pet theories on social reform and public charity, and to obey implicitly his directions in carrying them out.

We cannot feel with Mr. Kane that this constitutes a just and sufficient ground for repealing one of the most beneficent and necessary acts ever passed by our Legislature. So far, indeed, are we from sharing his view of the subject that we would wish to see the commissioners strengthened to the utmost by the support of the public and the cordial co-operation of the Legislature. We would wish to see every obstacle removed which impedes the efficient action of the board; and we regret that Mr. Kane has allowed his temper so far to master his courtesy and judgment as to lead him to make an unprovoked and unwarranted attack both on his colleagues and on an excellent act of Assembly.

MEDICAL SERVICE IN THE NAVY.

THERE has been manufactured in the Navy Department, by irresponsible officers of the "line," a book containing more than fifteen hundred regulations, to guide the official conduct of persons employed in the navy. The collection is sanctioned by the Secretary of the Navy, though many of the regulations are in conflict with both the letter and spirit of the statutes, as well as with the dictates of good sense. The work was prepared in conclave by a few line officers exclusively, printed and issued without the knowledge of any staff officer, and stamped as a code of law by the approval of the Secretary of the Navy. It may be justly characterized as the legislation of a privileged and preferred class. A determination to disparage medical and all other staff officers is apparent throughout its pages. A single reference is enough to sustain this assertion.

One of these regulations substantially requires that captains or commanders of the line shall be associated with surgeons to determine a question of permanent disability or claim for pension in every case occurring in any naval hospital. The question involves, of course, discussion and consideration of the nature and character and cause of the disease or injury under which such claim is preferred. Is there any conclusive reason why captains and commanders of the line should be required to participate in work of this kind? Is it supposable

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that the education of line officers at the Naval Academy qualifies them to determine questions touching the causation of disease and the degrees of disability resulting therefrom, or that those whose studies are especially and closely connected with such matters are incompetent to reach a just conclusion without extraneous assistance? Or is it pretended that medical officers are less honorable, less intelligent, less sensible of the requirements of the oath of office, than those of the privileged class, and hence need to be virtuously guided in the discharge of duties of this nature?

If line officers are in no degree qualified to judge in such cases,—and we believe they are not;—if medical officers are as faithful in the performance of all their duties as line officers,—and we believe they are,—to what circumstance can this offensive and useless regulation be ascribed, other than to ignorant prejudice and a settled purpose to impair the respectability of medical opinion, and, as far as practicable, to degrade medical officers before the naval service and the public? To thus snub men in the exercise of their vocation—to thus call in question their professional ability and official as well as personal integrity—is not the likeliest way to evoke all the energy and zeal men are capable of exerting in the performance of their duties.

We may properly ask, Whence is derived the authority of the Navy Department to assume legislative functions and make laws in secret sessions by unknown persons? It is reserved to Congress by the Constitution "to make rules for the government and regulation of the land and naval forces."

"An act making appropriations for the naval service for the year ending June 30, 1863, and for other purposes," approved July 14, 1862, provides (section 5) "that the orders, regulations, and instructions *heretofore* issued by the Secretary of the Navy be, and they are hereby, recognized as the regulations of the Navy Department, subject, however, to such alterations as the Secretary may adopt, with the approbation of the President of the United States."

Through a most liberal construction of this one sentence of a statute, it has been assumed that Congress has delegated to the Secretary its constitutional power to make rules for the government of the navy; and, under his authority and sanction, a sort of private printing-press has been established in the office for printing general orders and books of regulations concocted by a set or "ring" of favored line officers, always maintained in or around the Navy Department. They mean well—for themselves,—no doubt. In them there is no lack of zeal in making regulations. We regret that we are not quite so well assured of the quality of the wisdom and discretion used in their vicarious exercise of legislative functions. Possibly the revocation of this authority, by Congress annulling the section of the act above cited, would tend to improve the harmony between the line and staff officers of the naval service. Without the authority of any such statute, the Secretary may issue general orders as occasion for them arises; and these, with the statutes, should be sufficient to guide gentlemen in the discharge of their official duties. It may be safely assumed that the Secretary of the Navy will not sign a general order without taking time to consider its import, while he may give his sanction to fifteen hundred regulations at once on his faith in the technical knowledge of those who contrive them. This piece of law may be repealed with advantage, because it constitutes a legal foundation for a system of quasi-legislation by three or four members of one class applied to control all classes in the navy, in many instances offensively and uselessly. Indeed, this bit of legislation virtually places the ruling of the service under the domineering spirit of an arrogant, self-created caste. The existing code is the third which has been prepared and printed in the Navy Department since 1865. The second one was suppressed; and so should the present one be.

CORRESPONDENCE.

NOTE FROM DR. JOHN J. REESE.

A PERIPATETIC ABORTIONIST.

MR. EDITOR:—Among the many signs of "progress" in our day and generation, I will mention one that has just come to my knowledge, and which is rather in advance of anything in its line that I have yet heard of.

Calling a few days ago upon one of my lady-patients, who had lately been confined, she mentioned to me the following circumstance.

About a month before the birth of her infant, she had been favored with a call, at her own house, by a very respectable-looking and well-dressed lady,(?) apparently about twenty-one years of age, who asked to see her, but without sending up her own name. When she came down to the parlor, the visitor first politely introduced herself as the proprietor or vendor of a certain cosmetic and hair tonic, highly praising its virtues, and offering it for sale. My patient declined the purchase, saying that she never made use of anything of the kind. Then the lady-visitor astonished her hostess—a perfect stranger—with the remark, "I perceive you are in the family-way and near your confinement." To this the other lady quietly assented; and the visitor then remarked that the lady did not seem to her to be very strong, nor well calculated for having children, and, moreover, that the responsibility of bringing up children was so great that she ought not to think of incurring its risk; and, further, that she (the visitor) was in possession of a secret, which she had imparted (for a consideration) to numerous ladies similarly circumstanced, who had employed it with success, and that she would sell it to her for the sum of ten dollars! She assured her that by using this wonderful specific her child (then *in utero*) would be destroyed, and so come dead into the world; and that, by its further use, future pregnancies would either be prevented, or rendered abortive!

Fancy, Mr. Editor, the surprise, indignation, and even consternation of a refined, delicate, virtuous woman at such an infamous proposal! So soon as she could find utterance, she expressed her horror at the murderous idea, and immediately ordered the intruder to leave the house. On rising, the latter

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coolly asked the lady "if she were an American." She appeared surprised upon being informed that she had been born in Philadelphia,—remarking that American ladies (*proh pudor!*) are not generally so squeamish on such matters!

As a parting legacy, she informed my patient that she (the patient) was quite too ethereal and spiritual for this lower sphere, and that she was better suited for a higher one!

Now, is not this one of the most shameless and artful pieces of villany heard of for some time? How plausible, insinuating, and calculated to work upon the feelings and apprehensions of some nervous, timid, and not over-scrupulous subject!

Being desirous of discovering and exposing this she-imp of Satan, I inquired of my informant as to her general appearance, etc., but I could learn nothing more than that she was a well-dressed, rather handsome young woman, with a remarkably fine complexion,—the latter, no doubt, due to the *cosmetic* which she so adroitly employed as an introduction to her victims.

I forbear making any comments upon this unblushing piece of female effrontery. It is sad enough to know that even reputable married women in our community will not unfrequently resort to the vile and often murderous arts of the professional abortionist; but it is even sadder to know that there are young females in our city going about from door to door, actually *peddling* their infamous "abortion-wares" in our streets!

1840 GREEN STREET, January, 1871.

TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held January 11, 1871, at 8 P.M., Dr. W. H. Pancoast, President, in the chair.

Dr. W. H. PANCOAST presented a case in the person of Wm. Paul, aged 13 years. When eighteen months old, he was affected with what was called remittent fever. This was accompanied with evident congestion of the brain, the child lying in a semi-comatose condition, with tossing of the head to and fro. Finally an abscess discharged from the left ear. The brain-symptoms were ameliorated, and the child soon became well.

He is now suffering from talipes equino-varus of the left leg. Dr. W. H. Pancoast has often seen, in his experience, club-foot deformity said to be the sequence of convulsions in infancy. There is an apparent difficulty, in this case, in supposing the abscess to have involved the brain, as the undeveloped and distorted limb is on the same side as the outlet of the abscess. In this limb there is a want of development of the plantar fascia; the bones on the inner side of the foot are atrophied; the extensor muscles of the foot are lengthened, and the bones on the outer side of the foot are large. They are so much out of position, from the stretching of the ligaments and the twisting of the foot, that the lad walks on the back of the foot: on the upper surface of the cuboid bone there is a callous heel, while the natural heel is soft and delicate, and is twisted upon the inside of the front.

The treatment that Dr. P. proposes to adopt in this case will be, first to cut the tendo-achillis and probably the tibialis anticus and posticus,—the soleus muscle, though a little short, may not need cutting from the gastrocnemius,—also the plantar fascia, and then apply an instrument with two screws—one to bring down the heel and the other to force the foot outwards. This done, the muscles and bones will require time to regain their natural position.

The fact that the abscess had opened on the side where the muscles are paralyzed, is an interesting feature in this case, and raises the question whether the abscess had affected the other side of the brain, or had extended down the spinal canal along the cord.

Dr. GOODELL remarked that atrophic infantile paralysis resulting in deformity often occurs from a slight cold, and is usually sudden in its manifestations. The seat of the disorder is generally found in the spinal cord. The pathological changes are at first congestion, then proliferation of the connective tissue, with consequent pressure upon the nerve-tubules, terminating finally in sclerosis. Thus certain groups of muscles are paralyzed, and an adapted deformity takes place. Faradization is the best remedy when the disease has not advanced beyond six months' duration; after that period the deformities can be reached only by surgical treatment, because by that time the paralyzed muscles are hopelessly atrophied by a granular degeneration. But in this lad, even with an appropriate apparatus, much time will elapse before the tarsal bones could grow out of their present wedge shape. In his opinion, the abscess of the ear was a mere coincidence, and not the cause of the paralysis; for, apart from the very generally fatal termination of abscesses of the ear communicating with the cranial cavity, the constitutional symptoms would have been far more formidable, whilst the arm on the same side would have been paralyzed equally with the foot. For these reasons he was disposed to refer this lad's paralysis to a spinal rather than to a cranial origin. He further narrated the history of a fatal case of abscess of the internal ear, attended with necrosis of the temporal bone. In this case there was paralysis of the hand and foot of the same side, because the abscess was exerting a pressure upon the base of the brain, below the point of decussation of the anterior columns.

Dr. ANDREWS exhibited an encephaloid tumor of the neck, with the following remarks:

Joshua Shaver, the patient in this case, aged 37 years, is a native of Luzerne County, Pennsylvania, a blacksmith by occupation. He always enjoyed good health till about four and a half years ago, when a small tumor made its appearance in the submaxillary region, the consequence of what he denominates a "cold sore throat." From the description it was evidently an enlarged lymphatic gland in the region of the submaxillary salivary gland. It grew at first slowly, but of late increased rapidly in size until it has obtained its present dimensions. There were no marked constitutional symptoms: he was much inconvenienced, however, from its pressure upon the surrounding parts. Its measurements were as follows:

Circumference of base, 14 inches; circumference taken antero-posteriorly, 11 inches; circumference taken vertically, 9 inches.

From the general history of the case, and the physical appearances presented, it was pronounced unquestionably encephaloid. It was extirpated by Prof. Pancoast in the presence of the students of the Jefferson Medical College. The wound was brought together by the ordinary interrupted suture. No untoward symptoms occurred, and the patient returned to his home, cured, two weeks after the operation. Microscopic examination showed unquestionable cancerous elements.

Dr. LAUGHTON, of Bangor, Maine, being present, gave an account of a peculiar case which had come under his notice. He stated that in October, 1870, Miss E., fourteen years of age, brought to his office for examination a portion of a lumbricoid worm which she had just blown from her left nostril, and although the head of the worm had been severed and lost in the expulsion, it was still alive and writhing vigorously. When ejected from the nose it was apparently about two inches in length, but on holding it up with the forceps it immediately lengthened to six inches or more.

The history and result of the case fully corroborated the statement of the young lady. Some two years prior to that time she felt uneasiness in the posterior nares, which was soon followed by a watery or mucous discharge from that locality, which induced her to suppose that she was suffering from catarrhal affection. In a few months occlusion of both nasal passages occurred, producing necessarily a change in her

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speech, such as is caused by nasal polypi. She did not so much as breathe through the nose for nearly two years.

Dr. L. made a careful exploration of the parts with a sound, and Belloc's canula, and by the nasal douche, and found that no obstruction existed to the free passage of air, liquids, or instruments. The discharge ceased in a few days under the use of a mild wash of chloride of zinc, respiration and speech became normal, and the patient was cured. Not having seen the young lady previous to her calling at his office, the early history of this interesting case has been given as obtained from her mother, who is a highly respectable and intelligent lady.

Dr. COHEN thought it most probable that this foreign body had been lodged in the posterior nares, the more so since there was no history of sudden spasmodic cough or suffocative spasm. He had known pieces of wood to remain lodged in this region and give rise to cough.

Dr. GOODELL mentioned the case of a corpulent lady approaching the menopausis, who had been long afflicted with an incessant metallic cough. For this, venesections, blisters, expectorants, and antispasmodics had been in vain resorted to by several physicians, including himself. Finally, after a dreadful paroxysm of coughing, she threw up a lumbricoid worm. Acting upon this hint, he gave large doses of santonin, which expelled a prodigious number of these parasites, and resulted in an immediate and permanent cure.

At the yearly stated meeting, held January 18, 1871, at 4 o'clock P.M., Dr. W. H. Pancoast, President, in the chair, the following officers were chosen by ballot for the ensuing year:

President.—J. Aitken Meigs, M.D., 423 South Broad Street.

Vice-Presidents.—A. H. Fish, M.D., 1607 Vine Street; W. B. Atkinson, M.D., 1400 Pine Street.

Recording Secretary.—L. S. Bolles, M.D., 1609 Spruce Street.

Assistant Recording Secretary.—N. Hatfield, M.D., 501 Franklin Street.

Corresponding Secretary.—T. J. Yarrow, M.D., 1315 Girard Avenue.

Treasurer.—William M. Welch, M.D., 1230 Spring Garden Street.

Censors.—H. St. Clair Ash, M.D., 1112 Vine Street, term expires 1872; Charles S. Boker, M.D., 1622 Chestnut Street, term expires 1873; Alfred Stillé, M.D., 1500 Walnut Street, term expires 1874; Andrew Nebinger, M.D., 1018 South Second Street, term expires 1875; H. Y. Evans, M.D., 1631 Green Street, term expires 1876.

REVIEWS AND BOOK NOTICES.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by the Royal Medical and Chirurgical Society of London. Second Series. Vol. liii. 8vo, pp. lx., 305. London, Longmans, Green, Reader & Dyer, 1871.

The fifty-third volume of the Medico-Chirurgical Transactions keeps up to the reputation of its brethren, and is one of the few medical annuals which do not show signs of decrepitude with advancing years. About one-seventh of its bulk is occupied with a list of presidents, officers, and fellows of the society, which is eminently unprofitable reading at fifteen shillings per volume; especially is it so when repeated from year to year. It may be necessary to enumerate the officers yearly, but a list of some six hundred fellows is rather an expensive luxury to indulge in at an annual feast, and might both with profit and economy be reserved for a *bonne bouche*, say, for every tenth year. Eight of the papers are surgical, and five are medical.

Mr. Pollock, of St. George's Hospital, relates eight cases of amputation at the knee, of which seven were successful and one resulted fatally. He gives a table of forty-eight cases, and reprints one of Dr. Brinton's containing forty-five. Of the total number, sixty-seven recovered and twenty-six died. He argues in favor of leaving the articular cartilage and patella undisturbed, when not invaded by disease, and thinks that the operation should be regarded with favor, as less dangerous than amputation through the thigh. He gives full credit to American surgeons for their efforts in this field of operative surgery, and seems largely indebted to Dr. Brinton's much more comprehensive article published in the *American Journal of the Medical Sciences* for April, 1868.

Mr. Poland, the well-known surgeon of Guy's, narrates a case of compound fracture of the patella, with tables and an analysis of sixty-nine cases. The paper is the most complete upon the subject with which we are acquainted in our language, and too elaborate for analysis in our narrow limits.

Mr. Curling communicates a case for Mr. Little, late assistant-surgeon of the London Hospital, in which he succeeded in fishing out of the stomach a gold plate an inch and three-quarters long and one inch and a quarter wide, on which were four artificial teeth. The only difficulty experienced was in getting the foreign body past the narrowed portion of the œsophagus at its junction with the pharynx. He was certainly fortunate in obtaining a result which must be encouraging in similar cases.

Mr. Gant, of the Royal Free Hospital, records twenty cases of excisions of joints for disease, without a death. Nine were of the knee, of which six were successful and three were subjected to amputation, in one case after a second excision. Six cases were of the hip and five of the elbow, and all made good recoveries. In one of the elbow cases a repetition of the operation was required. When we add that, with the exception of one case of knee-joint and three of the hip, all the cases occurred in adults, it will be seen that this is a remarkably good average.

Sir Henry Thompson follows with one hundred and eighty-four cases of lithotrity, and records eleven additional ones in a postscript. Only thirteen cases are recorded twice, and no case of a third repetition of the operation on the same person is included; so that we have a total of one hundred and eighty-two individuals. The extremes of age were twenty-two and eighty-four years, only three being below thirty. In all cases where the stone was supposed to equal one ounce in weight, lithotomy was preferred and advised, and one or two of the fatal cases in the list are attributed to patients refusing to submit to lithotomy, and selecting lithotrity, in opposition to the advice given. The health of most of the patients was below par. Sir Henry lays stress upon the fact that he has never removed by cutting the stone which he had once attacked with the lithotrite. Twelve deaths are recorded, of which six died from unknown pre-existing inflammation of the kidney and ureter, four died from acute cystitis, and two succumbed to pyæmia. Three conditions are specified as leading almost certainly to death, even without an operation: they are—first, marked sacculation of the bladder; second, chronic pyelitis, with distended ureters; and, lastly, organic changes in the kidney. By deducting the cases in which these complications existed, it is claimed that not more than seven out of the twelve deaths can be attributed to the operation. In short, Sir Henry Thompson thinks that, with the instruments now in use, lithotrity, *gently* and properly performed, ought to have exceedingly small influence in the production of after-trouble. Excluding those cases where some phosphatic débris was removed shortly after the operation, thirteen cases are noted where a second distinct calculus was formed at the expiration of a year or a longer period; in five of these a fresh stone had descended from the kidney, and in eight phosphatic calculi had ensued upon chronic cystitis. In one of the latter number, phosphatic accumulation had taken place upon the partially exposed surface of an encysted calculus. Of course only in those cases where there was chronic cystitis induced can lithotrity be held accountable for the return of the disorder. We best get at the estimation in which this operation is held by the distinguished author of the paper before us, when he concludes that where the stone is not larger than a small nut the operation is absolutely without danger, as much so at least as is the passing of a catheter.

One hundred and twenty-two of the stones were uric acid and urates, forty were phosphatic, sixteen mixed, four consisted of oxalate of lime, one of pure phosphate of lime, and one of cystic oxide. In fifteen cases a fenestrated instrument was used; in all the rest the simple unfenestrated lithotrite was employed. Appended to the paper are short histories of one hundred and eighty-four cases, in each of which is included the name of one or more gentlemen who saw the case with the author.

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We have been led into making a longer abstract of this paper than of the others contained in the volume, both from its intrinsic value as so large a contribution to the subject of lithotrity, and because we have always admired Sir Henry Thompson's style, which, for fairness, perspicuity, and simplicity, we rarely see equalled.

The next paper is one upon supra-condyloid amputation of the thigh, in which Dr. William Stokes, Jr., proposes to amputate just above the condyles, and, removing the articular cartilage of the patella, bring about union between the bones, as Pirogoff does at the ankle. Two successful cases are related, and a lithograph of one is given. We fail to perceive the reality of the advantages claimed for this proceeding, nor do we admit the superiority of the mongrel "anchyloid" which he uses in the place of "anchylosed."

A short paper on a case of extroversion of the bladder in a female, by Mr. Barker, of Melbourne, is interesting from the success obtained by operation, but is quite obscure in the descriptive details. The two lithographs with which the article is ornamented would be more valuable were the lines of incision laid down on one of them. We judge that the means Mr. Barker employed were less likely to be successful than those recommended by Mr. Wood, and which we have recently seen applied with marked success in this country.

Dr. Wilhelm Meyer, of Copenhagen, communicates through Mr. Marshall an elaborate article upon adenoid vegetations in the naso-pharyngeal cavity, which growths appear to be of common occurrence in Denmark. The prominent symptoms are stated to be deficient or flat production of nasal sounds, deafness, a pinched appearance of the nostrils, with deficient secretion. The rhinoscope does not seem to answer generally for the examination of these bodies, but they are readily detected by the finger. The treatment advised is the removal of the growths by a peculiar hoe or scraper devised and pictured by Dr. Meyer, and afterwards cauterization of the surface. This paper also is accompanied by a lithograph illustrating the gross and microscopical appearance of the tumors.

(To be continued.)

ON THE CELLULAR STRUCTURE OF THE RED BLOOD CORPUSCLE. By JOSEPH G. RICHARDSON, M.D., Microscopist to the Pennsylvania Hospital. Reprinted from the Transactions of the American Medical Association for 1870. With a plate. Pamphlet, 8vo, pp. 10. Collins, Philadelphia, 1870.

The conclusions reached in this paper are based upon observations on human blood corpuscles, subjected to the action of water, and on the large oval corpuscles of the menobranchus or proteus, by the aid of the highest powers,—the one-twenty-fifth and one-fiftieth of Powell and Lealand. With regard to the former, the author clearly proves that the human red corpuscle contains two different ingredients,—the *hæmato-crystallin*, freely soluble in water, and a second substance, "of a whitish hue and insoluble in water, even on prolonged maceration;" with regard to the corpuscle of the proteus, that the first element—the hæmato-crystallin—crystallizes within the second, and is easily distinguishable from it.

Here, however, to our own mind, the proof ceases. Clearly it is shown that the corpuscle contains two elements,—the soluble coloring-matter, or hæmato-crystallin, and a substance "of whitish hue and insoluble in water." But that the latter substance is the cell-wall or envelope of the corpuscle, is difficult to prove.

Let us see on what he bases such view. We are told that in the blood corpuscle of the menobranchus, the effect of the crystal is precisely that which would be produced by sticks of similar shape contained within an ordinary bladder partly filled with fluid. Thus, he has seen "a single crystal, as if increased in length, thrust out the ends of the oval corpuscle, until the conjugate diameter of the cell became one-third greater, while its transverse dimensions diminished to less than half its original magnitude." Or, when one or more crystals happen to lie across the long axis, "the folded edge of the capsular membrane will be seen supported by the crystals like a washerwoman's clothes-line upon its prop."

Further, he says he has succeeded in performing the very difficult operation of cutting one of these large corpuscles in two, with sharpened needles, on the stage of the microscope, under a half-inch objective and No. 2 eye-piece; and that the colored contents were instantly evacuated, disappearing at once in the surrounding fluid, "while the cell-wall immediately shrunk together, and became twisted upon itself and around the nucleus into a perfectly hyaline particle."

He also alludes to the "wrinkled appearance" assumed by the red corpuscle on drying, and says that when pressure was made, by means of a mounted needle, almost directly over a red disk which had undergone this contraction, "its first effect was to round out the contour of the corpuscle and unfold the creases in its walls, the globule behaving as you might expect a bladder half full of water to do if you stepped firmly upon its centre; on continuing the process, however, no rupture of the walls could be detected, the contained fluid appearing rapidly to transude through its former envelope, which, on the needle being removed, collapsed to perhaps half its former size, and presented the aspect of a loose bag, almost without colored contents, surrounding the nucleus."

He finally says that the addition of fresh water to blood "occasionally afforded an admirable proof of the existence of a membranous envelope," first increasing the "thickness of the corpuscle," causing it to become gradually less elongated, and finally to assume a "spheroidal form," the colored portion being rapidly dissolved out, "leaving the nucleus and cell-wall more distinctly visible." Thus, he says, "I was enabled to satisfy myself conclusively that it possessed a bladder-like cell-wall, perfectly flexible (now that it was no longer distended with hæmato-crystallin), and capable of being dimpled in, as it were, by the force of the current impinging upon any side, until it applied itself accurately to the subjacent surface of the nucleus, thus furnishing strong evidence against the doctrine of a sponge-like stroma (or oikoid), as taught by Brücke and Stricker, being a constituent of the red blood corpuscle."

We have been thus careful to state all of the points of the author, that we may not fail to do them justice, and that others who may meet them may give them their own interpretation, without being biassed by the subsequent remarks which we may make.

We must be pardoned, however, if we now proceed to state wherein we consider his reasoning deficient. It may be comprehended in a few words, and lies in this, that he concludes, that because these phenomena which he has observed are compatible with the supposition that there is a cell-wall to the blood corpuscle, they cannot be compatible with any other view. Because bodies having cell-walls act in this way, it does not follow that bodies having no cell-walls will not act similarly. So with blood corpuscles. Though they might exhibit these phenomena if provided with cell-walls, it does not follow that they may not present the same phenomena under similar circumstances, and yet not have distinct cell-walls.

But, to take up the points separately, passing in a reverse order from that in which we have stated them, he says that the "dimpling in" of the cell-wall by the force of the current impinging upon one side is strong evidence against the view of Brücke and Stricker that there is a sponge-like stroma as the basis-substance of the blood corpuscle, in which the hæmato-crystallin is held in solution. We believe the error lies in applying these words "sponge-like stroma" too literally. There need not be associated with such a view any idea of *structure*; the sponge-like stroma may be, and undoubtedly is, a structureless jelly-like substance, which may take up the hæmato-crystallin in solution, just as a piece of gelatin will soak up water, swell out, and become colored by the absorption of a colored fluid, which it will again give up when subject to a fluid of such density as to promote an osmosis in the opposite direction. Nor is there any reason why such a body, rendered flexible by the exosmosis of that which gave it "body" or substance, should not "dimple in" when a current of water impinged upon it; or, on the other hand, that it should not assume the spherical form when an endosmosis of liquid is permitted, though its original shape be bi-concave, and though a "sponge" of similar shape should not act similarly.

We must here state, also, that, in first considering this view of the German observers, we were ourselves misled by supposing that the *oikoid* must necessarily be a structured sub-

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stance, and permitted ourselves to publish an objection to it on this ground, which we regret, since further reflection has convinced us that such a view is by no means necessary. But that a something—call it a "shell," "frame-work," or an "oikoid," as you please—does remain after the coloring-matter is dissolved out, no one can deny. Low powers as well as high (higher than a one-fifth we have seldom used) show this conclusively. This substance Dr. Richardson prefers to call a cell-wall. We think it more consistent with modern observation to call it a structureless "frame-work" or "stroma," though the latter perpetually suggests to us a structured appearance, which is clearly absent.

The phenomenon of the "wrinkled appearance" the author would scarcely expect us to allude to, since it is so clearly compatible with any of the views on the supposition that a removal of fluid has taken place. But the effect of pressure on the red disk which has thus undergone contraction, calls for some further notice. He says the "first effect was to round out the contour of the corpuscle and unfold the creases in its walls, the globule behaving as you might expect a bladder half full of water to do if you stepped firmly upon its centre." This seems at first a fact of some weight in favor of the vesicular nature of the corpuscle. But if, on the one hand, we admit, with Beale, that the corpuscle is still "a mass of soft viscid matter" with "the more soluble matter dissolved out" by the water, or whether we adopt the German view that the crystalline matter is dissolved out and there remains the albuminous frame-work, composed of paraglobulin, still viscid, but presenting an elastic resistance, we would yet have, by a sort of undulatory movement of the substance of the mass, an unfolding and smoothing out of the corpuscle in response to pressure.

With regard to his section of the blood corpuscle, according to the author's own admission, there is need of further evidence.

Finally, the crystallization of the hæmato-crystallin, with the resulting effect upon the shape of the corpuscle,—the crystal propping out the supposed cell-wall,—these are phenomena quite as compatible with the existence of a frame-work of paraglobulin, the shape of which would be changed by the gradual formation and elongation of the crystal with which it was so recently in intimate union. By these means, however, we think, the author proves conclusively the existence of two separable proximate substances.

We have gone over all the points made by Dr. R. in favor of the vesicular structure of the red blood corpuscle, and have attempted to show that they are quite compatible with other views. After all, the question resolves itself into one of probabilities. Can a larger number of phenomena be accounted for on the ground of the presence or absence of a vesicular structure, or are there any phenomena which can be explained on one and not on another? If such exist, the former view must be accepted. We believe that none of the phenomena which are interpreted on the supposition of the presence of a cell-wall fail to be accounted for on the supposition of its absence, while we believe that certain phenomena can be explained on the supposition of its absence which a vesicular structure would not admit. A mere notice, however, which has already grown too long, is no place in which to state them.

Although this criticism seems adverse, yet we would not have the author believe that we desire to disparage his observations. Those on which this monograph is based certainly do him great credit; and we can attest, from personal examination of his specimens, that, so far as observations go, he is correct, and his drawings accurately delineate the appearances they indicate. We believe his reasoning, however, to be faulty, and should recommend in all instances a less positive mode of expression in these matters of minute structure, which the most skilled observers interpret differently, even when looking at the same object with the same powers. It is seldom that the words "conclusively proved" can be applied to matters to be determined by microscopic investigation, and especially where high powers are called into play. For, although these assist us greatly, yet it must be admitted that the very objects for which we call upon them are those of doubtful nature, else could they be settled by the average powers.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA. 8vo, pp. 77. Wheeling, Frew, Hagans & Hall, 1870.

The transactions of State medical societies are rarely distinguished by much that presents either interest or originality, and few will consider this volume an exception to the general rule. The report of Dr. Safford, on the Topography, Climatology, and Epidemic Diseases of Wood County, and that of Dr. Hildreth, on the Meteorology and Epidemic Diseases of Ohio County, possess, however, a good deal of local value, and are evidently the result of careful preparation. A paper of more general interest is that of Dr. John Frissell, of Wheeling, entitled a "Report on Stone in the Bladder and Urinary Passages," which contains some accounts of cases in which lithotomy was performed by the author, and which have not hitherto been recorded. It is to be regretted, however, that Dr. Frissell has taken occasion to attack several well-known surgeons because they performed lithotripsy in cases in which he thought lithotomy would have been the better operation. Such attacks are always in the worst possible taste, and in this instance particularly so, because it does not appear that he has ever himself performed the operation, and therefore cannot judge of its value from experience. The volume also contains an account of a new stethoscope, devised by Henry J. Wiesel, of Wheeling, which is described as a wooden ovoid cylinder, one and a half inches in depth, which fits over the external ear, one end covered by a cushion, to fit the irregularities of the head, and an elastic band passed around the forehead, to hold it in its place. The following advantages are claimed for it: 1. It is portable. 2. It does not obstruct the ear. 3. It excludes all mechanical sounds. 4. It combines the mediate and immediate methods of auscultation. The description of the instrument is not quite so clear as is desirable, and it is possible, of course, that we may have misunderstood it; but it would seem to us to unite rather the disadvantages than the advantages of the two methods of auscultation.

BOOKS AND PAMPHLETS RECEIVED.

Physical Culture in Amherst College. By Nathan Allen, M.D. Prepared by the Request of the Trustees. Pamphlet, 8vo, pp. 46. Lowell, Mass., Stone & Huse, 1869.

The Intermarriage of Relations. By Nathan Allen, M.D. Reprinted from the Quarterly Journal of Psychological Medicine and Medical Jurisprudence for April, 1869. Pamphlet, 8vo, pp. 56. New York, D. Appleton & Co., 1869.

Population: Its Law of Increase. By Nathan Allen, M.D. Read at the Meeting of the Western Social Science Association in Chicago, November 12, 1868. Pamphlet, 8vo, pp. 32. Lowell, Mass., Stone & Huse, 1870.

The Physiological Laws of Human Increase. By Nathan Allen, M.D. Extracted from the Transactions of the American Medical Association. Pamphlet, 8vo, pp. 27. Philadelphia, Collins, 1870.

Physical Degeneracy. By Nathan Allen, M.D. Reprinted from the Journal of Psychological Medicine, October, 1870. Pamphlet, 8vo, pp. 41. New York, D. Appleton & Co., 1870.

Catalogue of Medical Portraits. Prepared from Original Photographs under the supervision of W. H. Helm, M.D., of Sing Sing, N.Y.

Annual Announcement and Circular of Long Island College Hospital, Brooklyn, N.Y. Session 1871.

Food for Infants. By Hiram Corson, M.D. Reprinted from the Northwestern Medical and Surgical Journal. 8vo, pp. 14. St. Paul, Pioneer Printing Co., 1870.

The "Rubber Air-Cushion" in the Treatment of Complicated Fractures and other Serious Injuries of the Lower Extremities, with Illustrative Cases. By L. D. Mason, M.D. Reprinted from the New York Medical Journal, December, 1870. New York, D. Appleton & Co., 1870.

Bloodletting as a Therapeutic Resource in Obstetric Medicine. By Fordyce Barker, M.D. Reprinted from the New York Medical Journal, January, 1871. New York, D. Appleton & Co., 1871.

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GLEANINGS FROM OUR EXCHANGES.

THE CAUSES OF THE OCCASIONAL FAILURE OF THE OPERATION FOR SQUINT.—In a paper read before the Medical Society of London, Mr. W. Spencer Watson (*British Medical Journal*, December 31, 1870) gave the results of an analysis of one hundred and three cases of convergent strabismus, and discussed the causes of the failure of tenotomy of the tendon of the rectus muscle, under the following heads:

1. The pathological conditions were in some instances misapprehended. Squint had been supposed to depend in ordinary cases upon mechanical obstructions to the movement of the muscles, or to bands of fasciæ; but, from the free mobility of the squinting eye when the other was closed, this was evidently an error. In two-thirds of the cases, hypermetropia was one of the conditions present in squint. At the same time, retinal changes had a material influence in determining the permanent character of the squint.

2. The operation might fail in improper cases: for instance, where there was eccentric fixation, an apparent strabismus was seen, and here an operation would give rise to diplopia, and would not probably produce improvement in the patient's condition unless the other eye were much impaired in visual power. Or, again, strabismus might be apparent where one eye was very much larger than the other, from progressive myopia in one, the other being normal. The cornea of the smaller eye appeared nearer the inner canthus than that of the larger eye, and this appearance might mislead the surgeon.

3. The operation might fail from not being properly performed: the tendon might be missed, or divided too far from the sclerotic insertion.

4. The after-treatment might be improper; the patient might object to a second operation, or to the wearing of spectacles; or, the refraction not having been ascertained, the surgeon might neglect to order the necessary glasses, or might cover up the eye too long.

In certain cases of periodic squint, apparent squint, and squint in very young children who could not wear glasses, as well as in cases due to brain-disease, the operation should not be performed. Mr. Watson remarked upon the importance of adapting the kind of operation to the size of the squint, and the advantage of using the strabismometer before operating, that of the late Mr. Zachariah Laurence being the most convenient and effective.

ANALGESIA IN VERTEBRAL CARIES, COMPARED WITH THAT IN HYSTERIA.—Rosenthal describes at length (*Vierteljahrschrift f. d. prakt. Heilkunde*, and *Boston Med. and Surg. Journal*, December 29, 1870, p. 433) two cases of angular curvature, associated with chronic myelitis and local anæsthesia and analgesia. Charcot, in one case of hysteria with chronic contraction of the extremities, has observed sclerosis of both lateral columns and disappearance of the anterior roots; all other observations in cases of hysteria have resulted negatively. The points of resemblance between hysteria and myelitis are:

1. Slight cases present only analgesia. As the intensity of the disease increases, anæsthesia is added, following a centrifugal course; and anæsthesia is usually the first to disappear during recovery. This coincides with what Schiff demonstrated as occurring after section of the gray substance, and with what the author himself has observed in a case of traumatic lesion of one lateral half of the cord, and two cases of vertebral caries with disease of the nerve-cells of the gray horns.

2. Anæsthesia and analgesia in hysteria always observe the limits which Voigt describes as bounding the cutaneous nervous ramifications. This is also the case in spinal paralysis. Assuming that the spinal cord is the seat of the morbid processes which give rise to many cases in hysteria, we infer that simple diminution of the facility of transmission gives rise to analgesia, merely; that central lesions coincide definitely with peripheric; that anæsthesia and analgesia of the upper and lower extremities imply an affection not solely of the corresponding part of the posterior columns and gray matter, but *ex contiguo*, usually of that of the gray mass of the anterior horns, and hence motor paralysis.

DIVISION OF WHITE BLOOD CORPUSCLES.—According to the following method, cell-division can be tolerably easily and surely observed: A drop of the blood of the Triton is placed upon a microscopic slide, or, preferably, some warming apparatus is used; then the blood is put on a deck-glass with oiled edges, and, being covered up by a second deck-glass, is examined at a temperature of 75°–85° F.

At this temperature, it frequently occurs that the large granular cell arranges itself into two lumps connected only by a narrow band or bridge. This bridge gradually becomes longer and thinner, whilst in both parts of the cell, the liveliest changes of form are going on. Either of the following may now occur: the protoplasm, by means of the connecting band, again flows together and transforms itself into one lumpy mass, or else, and what is by no means infrequent, the narrow band breaks, and each part of the cell, after having drawn in the piece of band adhering to it, moves on with the most active changes of form.

In a few isolated cases, a nucleus-like body can be recognized in each of the thus newly-originated cells.

Another type of division is the following: a colorless cell gradually spreads itself out into an extremely thin plate; generally, at some peripheral point, a prominence makes its appearance, containing a nucleus sharply defined from the rest of the mass. This prominence enlarges somewhat, and gradually separates from the rest of the mass; the latter draws itself into a lump and moves on. Around the sharp edges of the nucleus, a trace of protoplasm is recognizable through the slow changes of form that take place.

A third form of division is, finally, seen in the wandering-cells of the tongue and cornea of the frog, described by Stricker* as *Abschauung*.

Observation shows that a cell of Triton's blood may divide more than once, and in different methods. In the white corpuscles of the frog, division, either by the breaking of a previously-formed connecting band or by the budding process, can also be seen on the application of heat.

The human white blood corpuscle can, with difficulty, occasionally be seen to divide under a temperature of 95°–100° F.

FATAL CEREBRAL CONGESTION CAUSED BY CHLORAL.—Dr. George G. Needham reports the case of a woman, æt. 50, suffering from mental unquietness amounting to insanity, who took chloral in 30-grain doses, as follows:

On the 21st, at 5.30 P.M. and at 11 P.M.; on the 22d, at 10 A.M. and 3 P.M. (each a half-dose); on the 23d, at 1 A.M., at 8.10 A.M., and at 1.30 P.M. On the evening of the 22d, before taking the fourth dose, she was out of bed and moving about. On the morning of the 23d, she seemed to be awake. "On the 23d, at 7 A.M., I found her," says the doctor, "sleeping, and with a somewhat rapid pulse, and at 6 P.M. she was still sleeping. On the morning of the 24th, I began efforts to waken her; pulse, 108; respirations, 27; pupils moderately contracted. These efforts were continued through the day and following night without avail. The most that could be done was to cause groaning, momentary opening of the eyes, and futile efforts at articulation. During the night $\frac{1}{16}$ gr. of strychnia was given hypodermically in three doses. Up to 4 P.M. of the 25th her condition remained stationary; breathing, 28–30, sometimes stertorous, but mostly quiet; nostrils faintly sensitive to ammonia; pupils contracted; conjunctivæ sensitive; feet warm; voluntary motions of limbs hardly perceptible during the day, but much more so during the night. From 4 A.M. her condition rapidly grew worse; her pulse rose and weakened, her coma became more absolute, and her respiration more stertorous and rapid. She died at 3.55 P.M."

At the autopsy, the brain alone was examined. It was found everywhere deeply congested, but otherwise apparently normal, save only in the presence of a sero-gelatinous exudation in the meshes of the pia mater.

ON TWO CASES OF DIPHTHERITIC PARALYSIS SIMULATING LOCOMOTOR ATAXIA. By T. GRAINGER STEWART, M.D. (*Edin. Med. Jour.*, May, 1870, p. 988).—Two cases are related in which, at intervals of three weeks and two months

* Studien, 1869.

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respectively, after recovering from attacks of diphtheria, the patient became affected with symptoms simulating locomotor ataxia. In both there was marked unsteadiness of gait, with inability to stand with the eyes closed, but with preservation of muscular power. In one case there was also, at a later period, gradual diminution of sensibility and impairment of power. Both cases recovered perfectly under the use of rest, nourishing diet, sea-air, and sea-bathing, without any systematic internal treatment, though nitrate of silver was given for a short time in each case.

The points which the author indicates as important to bear in mind in diagnosticating this form of diphtheritic paralysis from true locomotor ataxia, are as follows:

1. The history of sore throat in the diphtheritic affection, contrasting with that of sharp, shooting neuralgic pains and other prodromata in progressive locomotor ataxia.

2. The existence of throat-paralysis, indicated by nasal tone of voice and dysphagia, especially of fluids, occurring only in the diphtheritic.

3. The dilated pupils and paralysis of accommodation not occurring in any excepting the diphtheritic.

4. The suddenness with which, after diphtheria, the ataxic symptoms become developed.

5. The gradual superaddition of paralysis of cutaneous sensibility and of motion.

In this paper, and in the debate which followed (*id. loc.*, p. 104), the view is more than once expressed that the above cases are unique. A complete description of diphtheritic ataxia will, however, be found in Jaccoud's admirable work "Sur les Paraplégies et l'Ataxie du Mouvement," (art. "Ataxie Diphthérique," p. 631), and a well-marked and fatal case has been recorded by Dr. Gray (*Med. Times and Gazette*, February 6, 1869, p. 141).

THE INTIMATE PATHOLOGY OF CONTAGION.—The *Med. Times and Gazette*, October 15, 1870, notices a paper on this subject by Dr. Burdon-Sanderson, contained in the twelfth annual report of the medical officer of the Privy Council. He holds that the contagious material is neither gaseous nor soluble in water, but constituted by particles of excessive minuteness. Two views may be adopted in regard to the specific power of these minute particles: either they are imbued with a specific poison of a liquid character—which it is hard to believe—or depend for this power on something inherent in them, without which they could not exist. The one is the chemical, the other the vital, theory of infection. Thus far analogy certainly favors the latter assumption; but, going beyond, we are lost in a sea of mystery. Hallier and others have attempted to fathom this by invoking the aid of the phenomena of fermentation. In this process certain fungi are developed *pari passu* with the product of fermentation. Now, where putrefaction is going on, something similar is observed: exceedingly minute spherical bodies there abound, which, under certain circumstances, lengthen out and form what are called "bacteria," or, as many now prefer to term them in both stages, "microzymes." Can these be traced through their various degrees of development, starting off from one common seed, but maturing into bodies of very different kinds, each producing putrefaction or organic changes, also very diverse? Hallier's theory of the origin of cholera in a rice fungus is, we fear, doubtful. At best, even now it is a speculation, but it shows the direction taken by many modern investigators, and shadows forth what many believe to be the true theory of disease.

EXSECTION OF THE HEAD OF THE HUMERUS FOR "CHRONIC RHEUMATIC ARTHRITIS."—Professor Blackman, of Cincinnati (*Amer. Practitioner*, January, 1871), reports probably the only case on record, of removal of the head of the humerus in consequence of the changes produced in it by rheumatic gout. The patient was an Irishman, fifty years of age, who had very limited use of the left arm. The head of the bone was displaced on the axillary border of the scapula, and could be thrown easily from its new position by passive motion, giving a crackling sensation; a chain of enlarged lymphatic glands was traced down the axillary region, and a tumor the size of a large fist presented itself in the left mammary region, from which came a free purulent discharge. On the 24th of May, 1870, an incision was made down upon the joint, and when the capsule was opened, a yellowish, thin fluid escaped, and a fistulous tract connecting the cavity of the joint with the pectoral abscess, was disclosed. Through the incision the dislocated head of the humerus was turned out, and two inches of softened porous bone removed with the saw. The head of the bone was flattened and its axis changed, and it presented the other morbid appearances so well described by Mr. Adams. On the 14th of June the abscess had disappeared, and three months later the incision over the joint had completely closed.

DR. GAMGEE (*Chem. News*, December 30, 1871) writes of "CHLORALUM,"—as the chloride of aluminium, now coming into use in England as an antiseptic and disinfecting agent, is called,—that, though not volatile, it may be made of great use as a disinfectant by means of a steam atomizer. Solutions of it of a sp. gr. of 1005 to 1010, containing from 1 to 3 parts to 140 to 70 of water, are strong enough to preserve meat and fish which have been dipped into them and then hung in dry air. In these, though the solution contains less than one per cent., the preservation is complete. He thinks it better than sulphurous acid, and, like the latter agent, it can be used where either the smell or the causticity of carbolic and cresylic acids interferes with their use. He has found that the use of carbolic acid is often given up on account of its odor, and that there is a growing predilection for inodorous disinfectant agents, to which fact he attributes much of the success of Condy's fluids.

An odorless disinfecting powder is now made, containing 30 per cent., which competes in price with the 15 per cent. carbolic acid powder, and it is hoped also soon to be able to furnish large quantities at low rates. A company in London prepares wool and wadding saturated with chloralum. These substances thus prepared are styptic and antiseptic, and may be used as dressings, air-filters, etc.

RECOVERY FROM INTRACRANIAL ABSCESS.—Professor N. R. Smith (*Baltimore Medical Journal*, December, 1870) records the case of a clergyman who consulted him in consequence of a fistulous opening, not so large as a goose-quill, in the left parietal bone, which had for twenty years daily discharged fetid pus, and gave rise to occasional pain and vertigo whenever it was obstructed by the granulations which invested its canal. A probe sank by its own weight, apparently through a fluid into the cavity of the cranium, fully two inches and a half, when it encountered the membranes of the brain. By exploring carefully with the instrument, the existence of a hemispheroidal cavity, almost coextensive with the parietal bone, was ascertained. Twenty years previously the patient sustained an accidental blow at the site of the lesion, from a sharp stone, which was followed by necrosis and final separation of a small sequestrum involving both tables of the skull. With the view of giving free vent to the confined pus, a disk of ivory-like bone, which included the fistulous opening, was removed by the trephine, and three ounces of fetid pus escaped. Light dressings were applied. The dura mater slowly rose up and obliterated the cavity, and when seen one year later, the patient had entirely recovered.

THE SPECTROSCOPE IN THE ANALYSIS OF WATER (*Chem. News*, December 30, 1871).—Typhoid fever broke out among those inhabitants of a London lane who obtained their drinking-water from a well, the water of which, besides containing a large amount of unoxidized nitrogenous matter, was unusually rich in chlorides. Mr. A. H. Church, suspecting the well-water to be contaminated by leakage from the drain connected with a neighboring public urinal, made use of the following ingenious expedient to test the matter: Having first tested ten litres of the well-water for lithium by the spectroscope without finding a trace of that metal, he placed one gramme of a salt of lithium in the urinal, and within two hours was rewarded by finding, in one litre of the well-water, undoubted proofs of the presence of the salt. He considers lithium salts especially adapted for such a purpose, as they are apparently but little absorbed by most soils and gravels through which water usually passes. The application that may be made of this and similar tests is very extensive.

MIGRATION THEORY.—The *Quarterly Journal of Microscopical Science*, October, 1870, notices a paper read on this subject by Dr. Caton at the Biological Section of the British

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Association. The results of a number of experiments on the mesentery of the frog were detailed, in which the phenomena described by Cohnheim were observed. Inflammation in the fish and tadpole had also been studied: in the former, congestion was found to be absent during inflammation; this peculiarity was referred to the venous heart. Though the formation of pus-cells was observed, migration was never seen. In the tadpole, migration was observed to occur very frequently, produced by the slightest congestion, and even when all local irritation had been carefully avoided. The general conclusions arrived at were that cell-migration depends on congestion, and that its connection with the suppurative process is very doubtful. Cell-migration in the tadpole was exhibited under the microscope on one of the days of the meeting.

PATHOLOGY OF ANGINA PECTORIS.—Drs. A. Eulenburg and P. Guttmann, of Berlin, after having fully set forth (*Archiv für Psychiatrie*, ii. p. 15, 1869, and *Archives Générales de Médecine*, September, 1870) the history of the subject, and discussed all the common facts and the current theories, sum up in these terms: "Angina Pectoris is a neurosis both of motion and of sensibility. The symptoms to which it gives rise may be provoked by causes of a different nature, even extraneous to the heart. All the cardiac nerves are probably more or less affected in this malady, and the variability of the phenomena observed in different cases depends, without doubt, on the more or less active part that the nerves which unite together in the cardiac plexus take in the production of these phenomena. It is probable that the great sympathetic plays the most important *rôle*, for it is this which forms the major part of the cardiac plexus."

MR. BOLLMAN CONDY states in the *British Medical Journal*, that Condy's fluid (permanganate of potassa) is not an antiseptic or preserving agent, but merely a disinfectant, and that more than this is not claimed for it. As both it and fresh air depend for their virtues on the same element, viz., oxygen, which is a prime agent in decomposition, his first statement is self-evident. He thinks, however, that if the less educated portion of the community hear too often that substances ready to part with their oxygen are not antiseptics, they may doubt their value even as disinfectants, and hence pay less attention to cleanliness and ventilation than they now do.

CANCER OF THE THYROID GLAND.—Dr. Payne exhibited before the Pathological Society of London (*Med. Times and Gazette*, December 3, 1870, p. 660) a specimen of cancer of the thyroid gland in an elderly lady who had suffered for years from goitre. Lately she had bronchitis, dyspnœa, and loss of voice, supposed to be due to a thoracic tumor. After death it was found that the left lobe of the thyroid had pressed on the recurrent laryngeal nerve, and was converted into a thick-walled cavity containing creamy material like medullary cancer, also isolated nodules containing multiple nucleated cells. The mass really consisted of two structures,—that of ordinary goitre and that of cancer.

PATHOLOGY OF LEUCÆMIA LIENALIS.—Dr. Hofmann, in a paper on this subject (*Wiener Medizin. Wochenschrift; New York Med. Journal*, December, 1870), from a careful examination of the urine, and especially of its coloring matter, appears to have demonstrated that in this affection there is not only a diminished formation, but an increased disintegration of red corpuscles,—at least if the coloring matter of the urine is to be considered as a derivative of that of the corpuscles; if not, it must proceed from some other substance having strong coloring capacity.

DYSTOCIA FROM SYPHILITIC INDURATION OF THE CERVIX UTERI.—Dr. Putégnat (*Journ. de Bruxelles*, vol. xlvii.; *London Lancet*, April, 1870) mentions five cases of this kind, in which large and indurated ulcerations of the cervix were the cause of difficult parturition. All the confinements were premature. The first case necessitated incision of the os and turning, resulting in death to the mother. In the four remaining cases, the children all died in from two to five days after birth, and the labors were very tedious on account of the feeble state of the patients.

SUPERNUMERARY MAMMARY GLANDS.—A case is recorded in the *Revue Photographique des Hôpitaux* of a primiparous woman having two supernumerary breasts about the size of a small orange,—one situated in each axillary region. At the menstrual periods these glands were painful. After confinement the colustrum was found to be small in quantity and deficient in quality, as was likewise the lacteal secretion, which was established simultaneously with that of the normal organs.

CHLOROFORM DEATHS.—In the *Cincinnati Lancet and Observer* for January, 1871, Dr. W. W. Dawson adds twelve new cases to the melancholy list of "unavoidable deaths." We can hardly make an abstract, and must refer to the paper itself. Dr. D. believes a continued spasm of the heart is one cause of death, and occurred in a case under his care. He rests this belief upon the sudden cessation of the heart's action, and the fact that the heart was found empty.

INCONTINENCE OF URINE.—Dr. W. Thomson (*Lancet*, November, 1870, p. 703) highly recommends a dose of chloral at bedtime for this disease in children.

MISCELLANY.

ST. PAUL ACADEMY OF NATURAL SCIENCES.—This society was organized in 1870 by the election of Dr. R. O. Sweeney as President and Dr. Charles E. Smith as Secretary. The Academy was instituted by gentlemen interested in the study of natural history, for the purpose of forming a cabinet and museum which should illustrate the geology, zoology, botany, meteorology, etc. of the State of Minnesota. They have already secured eight thousand specimens, by gift, purchase, and exchange, and solicit from other institutions of a similar character an exchange of specimens.

A MARRIED DOCTRESS.—We learn, on what seems to be good authority, that the "leading lady"—to borrow a theatrical phrase—of the (female) medical profession in London is going to take unto herself a husband. Questions of interest come up in such a case. Will the lady continue to practise medicine and her husband to follow his own occupation? and if so, and the union should prove prolific, who will train up their offspring in the way they should go? One or two healthy children, to say nothing of a larger number, or of sickness, will take up nearly all the time of a young mother; and there is no profession or business which depends so entirely for its success upon the personal attention of its pursuer as does that of medicine.

ANTIQUE SURGICAL INSTRUMENTS.—It is stated that the Italian government has allowed M. Scoutetten to obtain photographs of over three hundred surgical instruments found in the ruined cities of Pompeii and Herculaneum. In this number there are only about sixty varieties.

APPLICATION for the office of assistant-surgeon in the navy is to be made to the Secretary of the Navy, accompanied by such testimonials as to general character and qualifications as may satisfy the Navy Department that the candidate is worthy of being admitted to examination.

A BILL to regulate the rank of staff officers in the navy passed the House of Representatives almost unanimously on the 23d of January. It needs the approval of the Senate, as well as of the President, to become a law.

CLINICAL EXAMINATIONS.—The Court of Examiners of the Apothecaries' Society in London now require, as a part of

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their examination, that the candidates shall chalk out on the trunk of a healthy man the anatomical relations of the viscera of the thorax and abdomen. This plan has already been employed by the Examiners of the Royal College of Surgeons.

The Court of Examiners have been thoroughly convinced of the utility of this apparently easy test by the results of its application. This is a significant expression, and we are fully convinced that the introduction of this or any similar clinical test into the examination of the candidates for graduation at any American medical school would display its utility even more conspicuously.

SURGICAL EXPERIENCES DURING THE FRANCO-PRUSSIAN WAR.—Professor Billroth gave, in the opening lecture of his clinic this year, a highly interesting account of the results of his observation upon the wounds during the present war, in regard to the ease with which metallic bodies are reputed to become imbedded and incapsulated in the body. He remarks that the general experience has been that modern projectiles, as a rule, give rise to suppuration, sooner or later, when retained in the body, and that their imbedment without giving rise to pain or suppuration is quite exceptional. He makes one other statement, which will probably sound strangely to many of our readers, who have become familiar with the newspaper descriptions of the wounds caused by the balls from the mitrailleuse as being unusually severe and frightful. In all the hospitals visited by Billroth, embracing thousands of patients, he could not find, on the most careful inquiry, any account at all of the injuries done by these balls; so that, although larger than the balls used in the chassepôt or needle-gun, they do not seem to make any characteristic wounds.

THE CHOLAGOGUE ACTION OF MERCURY.—Dr. Hughes Bennett has continued the experiments which formed the basis of the report of the committee of the British Association. He has especially studied the question whether mercurials possess any specific power of exciting the biliary secretion by irritating the orifice of the common bile-duct, as vinegar stimulates the salivary glands when applied to the orifices of the salivary ducts. The results of his experiments confirm entirely the conclusion reached by the committee, that mercurials are not cholagogues in any sense of the word.

DR. ELLIOTT'S SUCCESSOR.—Dr. William T. Lusk, of New York, has been elected by the Commissioners of Public Charities and Correction, on the nomination of the Medical Board, as Physician to Bellevue Hospital, to fill the vacancy caused by the death of the eminent Dr. George T. Elliott. The reputation which Dr. Lusk has acquired for professional talent and learning, and his success as a lecturer in the Long Island Medical College, and more recently in the Medical Department of Harvard University, Boston, would seem to fully warrant the selection made by the commissioners.

RAILWAY-ACCIDENTS.—We find in a secular paper a quotation from the *London Lancet* to the following effect: "During the past year (1870) a total sum of £333,715 was expended by railway-companies in the United Kingdom as compensation for personal injury, of which the Great Northern paid £28,000; the Great Western, £20,000; the Lancashire and Yorkshire, £19,380; the Midland, £24,988; the London and Northwestern, £73,804; and the London, Brighton, and South Coast Railway, £47,457. It would be interesting, but impossible, to collect particulars as to the injuries inflicted upon their victims, whose hurts are supposed to have been healed by the application of more than a quarter of a million of money."

LIFE-INSURANCE.—It was recently decided in one of the U. S. courts that suicide was not a bar to the recovery of insurance, on the ground that insanity was a disease. We presume there must have been positive evidence of the insanity, other than the mere fact of self-destruction.

SCIENCE AND HOMŒOPATHY.—We believe we are correct in saying that, since the origin of Homœopathy, it has conferred no benefit, directly or indirectly, upon science at large; its students have never developed a single fact or principle, nor made a single important discovery, in working out their system. Moreover, we may assert, no prominent advocate of Homœopathy has ever become known as a scientific man, nor has any man of high standing in the scientific world ever become an advocate of Homœopathy. If these statements are not facts, they can be readily disproved.

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the Health Office Reports:

	For the week ending	
	Jan. 28.	Feb. 4.
Diseases of the Brain and Nervous System	43	35
Diseases of the Organs of Circulation and Respiration	129	146
Diseases of the Abdominal Organs	15	33
Zymotic Diseases	17	25
Constitutional Diseases	5	13
Casualties	2	9
Stillborn	17	13
Unclassified	51	50
Unknown	1	4
Totals	280	328
Adults	145	188
Minors	135	140

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 18, 1871, TO FEBRUARY 3, 1871, INCLUSIVE.

MILLS, M., SURGEON.—By S. O. 39, War Department, A. G. O., January 28, 1871, upon being relieved by Surgeon Perin, to report by letter to the Surgeon-General for assignment to other duty.

PERIN, G., SURGEON.—By S. O. 39, War Department, A. G. O., January 28, 1871, to report to the Commanding General Department of the Missouri for duty as Medical Director of that Department.

MECHEM, A. F., SURGEON.—By S. O. 40, War Department, A. G. O., January 28, 1871, granted leave of absence for *six months* on surgeon's certificate of disability.

STORROW, S. A., ASSISTANT-SURGEON.—By S. O. 46, Headquarters of the Army, A. G. O., February 1, 1871, leave of absence extended *thirty days*.

PHILLIPS, H. J., ASSISTANT-SURGEON.—By S. O. 5, C. S., Headquarters Military Division of the Pacific, granted leave of absence for *thirty days*.

MIDDLETON, P., ASSISTANT-SURGEON.—By S. O. 43, War Department, A. G. O., January 31, 1871, relieved from duty in Department of Arizona, and to report to the Commanding General Department of the South for assignment to duty.

MACKIN, C., ASSISTANT-SURGEON.—By S. O. 9, C. S., Headquarters Department of the Platte, upon being relieved by Assistant-Surgeon O'Reilly, to proceed to Fort Kearney, Nebraska, for duty at that post

O'REILLY, R. M., ASSISTANT-SURGEON.—By S. O. 9, C. S., Headquarters Department of the Platte, assigned to duty at Sidney Barracks, Nebraska.

ROSE, GEO. S., ASSISTANT-SURGEON.—By S. O. 6, Headquarters Department of California, January 9, 1871, relieved from duty at Alcatraz Island and assigned to Benicia Barracks, California.

MICHLER, W. H. H., ASSISTANT-SURGEON.—By S. O. 37, War Department, A. G. O., January 27, 1871, relieved from duty in Department of the Missouri, and to report to the Commanding General Department of the Platte for assignment.

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WEDNESDAY, MARCH 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON INFANTILE PARALYSIS.

(Concluded from page 170.)

BY JOHN S. PARRY, M.D.,

One of the Attending Accoucheurs to the Philadelphia Hospital.

ALLOW me to allude, however, a little further to the symptomatology of the malady. The advent of the paralysis was sudden, and occurred during sleep,—an ordinary character of the disease. It is usually preceded by some premonitory symptoms, such as the irritability of temper and feverishness which were present in this case; but you must remember that the palsy may be the earliest and latest symptom. I have now under my care an infant ten months old, who, six weeks ago, awoke in the morning with his left arm completely motionless. He is a remarkably vigorous child, and was not known to have been at all unwell when put to bed the preceding evening. The only additional evidence of ill health was a slight eczematous eruption on the head and neck. He has now entirely recovered from the paralysis, though the skin-disease has not improved.

Rarely the disease is ushered in by a convulsion; and there are two such cases in the wards to-day. One is the patient who was the subject of my last lecture. You will remember that I called your attention to the deformities of her feet and hands when she was before you. The other is a little girl in one of my colleague's beds in the asylum. As a rule, the disease is primary; but it is sometimes secondary, following hooping-cough, measles, pneumonia, and other affections.

It is stated that this paralysis is usually an incomplete paraplegia. In the present instance it was a hemiplegia; and I must confess that I have seen more examples of this than of any other variety. It may affect any of the extremities, either alone or combined. It is rare, however, to see the arm of one and the leg of the opposite side affected; though I saw one case of this kind in this hospital two years ago. The loss of power rarely extends beyond the parts supplied by the spinal cord, and it is apt to affect single muscles or groups of muscles. The left arm and leg seem to have been uniformly paralyzed at the outset of the disease in this patient, but now the loss of power is limited in the upper extremities to the extensors and supinators of the hand, which, Mr. Adams* states, are always affected together. In the leg, the diseased muscles are the extensors of the toes and flexors of the foot. According to the authority just quoted, the latter group is the one most frequently involved. The former is attacked second in frequency, while the extensors of the leg are the third set of muscles in the category, with which is generally associated paralysis of the extensors of the toes and flexors of the foot, or those of his first group.

Single muscles are apt to be affected in the following order of frequency: the extensor longus digitorum of the toes, the tibialis anticus, the deltoid, and, lastly, the sterno-mastoid.†

You see that the extent of the paralysis varies much. In the affected parts it is usually complete so far as motion is concerned, and the height of the disease is at its onset. With sensation it is different. In this history you heard that there was no marked change in sensibility; but, if altered at all, there was slight hyperæsthesia, which West says is usually true. In some cases there is no change in sensation; less frequently it is slightly blunted for a time. The special senses are not affected.

The diseased part is not rigid in the early stages, nor does it become so afterwards. As was the case here, the extremities fall as if dead, when elevated. Decrease of temperature attends the loss of power, the difference between the healthy and the diseased side sometimes amounting to ten degrees.‡ At this time the circulation is very much interfered with in the palsied part, and the limb becomes pale as well as cold. We have no such symptoms in our present patient, though I have no doubt that they were present.

Electro-muscular contractility demands some notice before I cease speaking of the symptoms. I have carefully examined the condition in Ellie's arm and leg by means of the induced current. She became very much alarmed at the use of the battery, and, though she prevented a perfect investigation, it is certain that the contractility is not entirely destroyed, but is very much lessened, in the affected muscles. At the commencement of the malady the muscles respond as usual to either the induced or the direct current, but as the case progresses and atrophy occurs they cease to contract, or do so but feebly, when tested in this manner. The cause of this we will study as we progress in the lecture. To one point, however, I wish to direct your attention especially. In some instances, after the muscles have ceased to contract when the induced current is employed, they will respond vigorously to a slowly-interrupted direct current. The importance of this fact can hardly be overestimated, especially as the same cases, after a longer or shorter therapeutic use of the direct, react upon the application of the induced current.

I shall now allude again to the production of deformities after an attack of infantile paralysis. This matter is of the greatest practical importance, gentlemen, and I beg you to remember the relation existing between the two conditions. This affection is the potent cause of almost all the deformed shrivelled limbs that find their way to our orthopædic hospitals; and I ask you to remember the statement that many cases of non-congenital club-foot have their origin in the disease which we are studying. In connection with this, remember, too, that Dr. Taylor, of New York, asserts§ that these deformities are always preventable,—which is no doubt true in many instances.

The inner surface of this child's wrist presents two well-defined ridges, as you now notice. These are produced by prominence of the tendons of the flexor carpi radialis and flexor sublimis digitorum; and I have no doubt that it has occurred to you that the deformity so marked in this hand is the result of contraction of these muscles. Such, however, is not true. That they are shortened we cannot deny; but this is the result rather than the cause of the deformity. Here the power of the supinators and extensors has not improved with that of the other muscles of the forearm, and the hand is hence given over to the control of their opponents, which have produced this malposition, not by active contraction, but by a simple shortening, which was necessary to enable them to continue their function when their points of origin and insertion are approximated. This is the "adapted atrophy" of Paget, in which the fault is not in the shortened muscles, but in those which are stretched and paralyzed. Dr. Taylor believes that these distortions are all the result of positions assumed as the effect of gravity immediately

* Club-Foot: its Causes, Pathology, and Treatment, p. 64.
† Ibid.

‡ Dr. W. A. Hammond, Jour. Psycholog. Med., vol. i. p. 53.
§ Infantile Paralysis and its Attendant Deformities, p. 44, Phila., 1866.

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after the occurrence of the paralysis, and hence that they are always preventable.

As yet, nothing has been said of the changes which the paralyzed muscles undergo. These are very interesting, and consist essentially in fatty degeneration. In order to enable us to examine them, Duchenne has devised the instrument which I now show you. As you see it, it resembles an ordinary trocar, but you notice that it consists of two parts, one sliding on the other, while in the stationary portion there is a shallow groove with a small cavity, where the sliding and fixed parts come in contact when the instrument is closed. I yesterday introduced it closed into the body of the affected muscles, both in the thigh and leg, opened it when fairly in position, and, closing it quickly, brought away sufficient muscular tissue to make satisfactory microscopical examinations. Before using the instrument, I confess, I felt somewhat fearful of the result. You see that it is large to use for diagnostic purposes; but it is now twenty-four hours since it was introduced, and there are very slight evidences of inflammation at the seat of punctures. Smaller trocars have been constructed, but most of them have failed. If you wish any further information in regard to them, read the account of the proceedings of the Pathological Society of this city, published in the *American Journal of Medical Sciences* for October, 1869, where my friend Dr. Keen describes and gives figures of several instruments of this kind. In both of the specimens of muscular fibre obtained, I found well-marked fatty degeneration. Some of the fibres seemed to be nearly healthy, but most of them were more or less granular, and the transverse striæ were but poorly marked. In some, these were entirely destroyed, and inside the sarcolemma were large fat-globules. In a few instances nothing was left but empty transparent tubes of myolemma, to which a few granules and fatty globules still adhered.

As we have no clinical microscope belonging to the hospital, I show you a photograph of Mr. Adams' plate, representing the degeneration of the muscles in infantile paralysis, which has been most accurately copied by Mr. Bell, at 1200 Chestnut Street, who, by the way, has made a specialty of anatomical photography. From what I have said, it is evident that the fatty degeneration has advanced to a considerable extent in this case. I wish to impress upon your minds, however, the fact that this is not the cause, but is the effect, of the paralysis; and that while it is the usual, it is not the invariable result of the lesion which produces the loss of power. In some cases it is not present at all, as was shown by Dr. Hammond; while in others the whole muscular tissue appears to be replaced by fat, as in the case which Mr. Quekett records in his Lectures on Histology.

It is probable, too, that in a majority of the cases the alteration is more granular than fatty. The characters presented when the muscle is examined by the microscope have a marked influence on the prognosis, for if these alterations have progressed to any extent, it is by no means so favorable as if they were slight.

In regard to the further pathology of infantile paralysis, I have already stated that the spinal cord is the part of the nervous system at fault. Precisely what changes this undergoes it is very difficult to say. It is probably, however, congestion of the cord; but very few autopsies have been made to verify this statement, for the simple reason that infantile paralysis, no matter what may be its duration, is not a fatal disease. In most of the few autopsies which have been made, we must confess that but slight evidences of congestion have been found; but by analogy the view which I have presented is strongly supported. For the arguments in its favor I refer you to Dr. C. B. Radcliffe's article on this subject in Reynolds' System of Medicine. It must not be denied, however, that equally good authorities, among whom is Dr. C. Hanfield Jones, say that the palsy in these cases is due to spinal paresis; but, unfortunately for this view, in some of the more recent autopsies of children dying after having had infantile paralysis, organic changes have been found in the cord, and such as seem to us to support the opinion that the original affection of the organ is congestion. This lesion has only been discovered since J. Lockhart Clark's admirable method of preparing nervous centres for microscopic examination has been introduced, and consists in what is called sclerosis of the cord.* The essential character of this is increase in the connective-tissue elements of that structure, which produces pressure upon the nerve-tubules and results in their atrophy and destruction of their functions, thus giving rise to permanent paralysis. The lesion is originally congestion, which leads to increased nutrition and proliferation of the connective tissue. In the first instance the size of the cord may be augmented, while afterwards it undergoes contraction. Compare this process in the spinal cord with cirrhosis of the liver, where we find, first, congestion, then, it may be, a low form of inflammation, with increased proliferation of the connective-tissue elements of the organ, which lead to pressure and atrophy of the secreting elements of the structure, with destruction of its function. Hence, gentlemen, you see that we believe that sclerosis of the spinal cord is rather the effect of the original lesion which produces the paralysis; in fact, that it and the fatty degeneration of the muscles have precisely the same relation to loss of motor power. In some cases it is true that other lesions have been found, as thickening of the meninges, or small clots or tumors pressing upon the cord. When sclerosis is found after death, it is said to involve the antero-lateral columns chiefly.

What part sclerosis and antecedent congestion of the spinal cord play in the production of congenital clubbed foot and hand I cannot say; but it has occurred to me that the pathology of these cases may be somewhat similar to that of infantile paralysis, and that they may have their origin in congenital sclerosis of the cord.

Treatment.—I have but little to say upon this point this morning.

If what I have just said in regard to the condition of the spinal cord is true, the indications are, first, to relieve the congestion of that organ, and, second, to prevent the increased proliferation of the connective tissue or sclerosis of the cord.

The former is to be effected by the use of mild counter-irritants to the back, or even by the local abstraction of blood, by leeches or cups applied along the spine. The latter, however, is to be employed only in strong and robust children. At the same time, I would advise you to administer ergot, because this agent, it is asserted, has the power of diminishing the amount of blood in the cord. This it does by stimulating the vaso-motor nerves and causing contraction of the vessels.

Writers upon this subject—and among them Meigs and Pepper†—recommend the administration of belladonna, alone or in combination with ergot, in the treatment of congestion of the spinal cord. I know nothing practically of its effects in infantile paralysis, as I have always confined myself to the use of ergot in the early stages of the disease, and have reason to be satisfied with the results.

Iodide of potassium is to be employed as an absorbent, to remove the new material produced by increased proliferation of the connective tissue in the cord. Hence you see that these two remedies are useful in different

* Charcot and Joffroy, *Archives de Physiologie*, Jan. 1870, p. 134.
† Diseases of Children, Phila., 1870, p. 582.

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stages of the affection,—the former early and the latter later in the progress of the case. This child has taken large quantities of the iodide, given for the inherited syphilis from which she is also suffering, but without much apparent benefit to the nervous disorder.

Of course you would support the strength of your patient if there be any debility, and, if anæmia be present, iron should be administered, of which the best preparation is the syrup of the iodide, which was given in this case combined with the iodide of potassium.

Strychnia and other preparations of nux vomica are not to be given until after the acute stage has passed, when they are very useful.

You should never neglect local remedies in the treatment of infantile paralysis. What you desire to do is to increase the power of the muscles.

The best local agent is electricity; and in using it the affected muscles are to be carefully isolated, and the remedy applied to them alone. In this connection, do not forget the fact which I have already stated, that in some instances where the diseased muscles will not respond to the induced current they will contract upon the application of a slowly-interrupted direct current, and that after the latter has been employed for some time they regain power, and will contract when the induced current is tried; and at that time it is well to substitute this for the other variety of electricity.

I have no time this morning to speak of the importance of proper gymnastic exercises in the treatment of the disease, and I therefore refer you to your text-books for information on this point.

IMPROPER FOOD

AS A CAUSE OF DISEASE AND DEATH IN INFANCY.

BY W. M. WELCH, M.D.

Read before the Philadelphia County Medical Society, October 13, 1869.

MR. PRESIDENT: A physician cannot long engage in the practice of his profession, in large cities especially, without having his attention directed to the large mortality of young children within their first year after birth.

Statistics gathered with great care show that in France one-fourth of all the children born die before they have completed their first year; and the reports of the Registrar-General of England give the proportion of deaths of children under one year old to the births, in England and Wales, as about one to six, while of the whole number of deaths, one-fourth are infants within their first year.

But let us look at home. Philadelphia, as may be seen by consulting the reports of the Board of Health for 1867 and 1868, gives a mortality of infants within the same period of their life of almost one-third of the whole number of deaths.

(The proportion of deaths to the births cannot be estimated with any degree of accuracy, on account of the incompleteness of the return of births.)

This is a fearful drain upon human life at its very threshold, and renders the study of the diseases of infancy one of peculiar interest. If no other motive should urge a physician to their thorough investigation, philanthropy alone, it seems to me, presents irresistible claims.

It has been said that the lives of many infants with faulty constitutions are withdrawn by the Creator as a means of protecting future generations against greater maladies. But before pronouncing this decree of fate upon these innocent sufferers, let us be sure that the causes which produce disease in them are not like those which lead to disease in general,—viz., the violations of some law of health; and as the laws which regulate their healthy development are most susceptible of violation, we would very reasonably expect to find them fall the most frequent victims.

From the moment of birth the child is actively engaged in the work of development. The changes in its structure are necessarily great and rapid; the constant and hurried transition through which every part is passing is a fruitful source of disturbed action. It therefore requires the most vigilant care, with special and guarded dietetics.

The powers of digestion and assimilation in the young infant are exceedingly feeble. Indeed, Nature has so beautifully adapted the means to its wants that it is not required to perform much labor in this particular, for its natural food needs but little elaboration before it is prepared to be taken into its economy. The mother's milk, therefore, is its most suitable nourishment, and when there is nothing to forbid her nursing her child, she should regard it as her imperative duty to perform to it a mother's part, and give it the benefit of that food which Nature has not only prepared for it, but has also declared to be more or less essential to its healthy development. She should also remember that by an obstinate and cruel refusal to discharge to her infant an obligation which mothers of other days looked upon as sacred, she alone is responsible for whatever may follow in consequence.

Fashionable life makes such numerous demands upon the time and energies of its votaries, that, rather than give up their amusements, they prefer to place their children under the care of paid nurses; but let them consider that in so doing it is not unlikely they may lose a portion of their maternal love, or else fail to receive the entire affection of the child, for no ordinance of God can be violated with impunity.

The dangers which attend dry-nursing, or raising by hand, should be more generally appreciated by mothers. Many think it no sin to deprive an infant of the breast, while they deceive themselves by the false notion that by raising it on the bottle there will be a saving of trouble. Let them be taught the difficulties of adapting food to the wants of the infant when they step aside from Nature's laboratory, as well as the inevitable dangers which attend the experiment.

Dr. Merriman says of dry-nursing, "It has been part of my duty to endeavor to ascertain the amount of mortality among infants from this source, and, after much careful inquiry and investigation, I am convinced that the attempt to bring up children by hand proves fatal in London to at least seven out of eight of these miserable sufferers; and this happens whether the child has never taken the breast at all, or, having been suckled for three or four weeks only, is then weaned. In the country the mortality among dry-nursed children is not quite so great as in London, but it is abundantly greater than is generally imagined. If parents were fully aware of the hazard to which their children are exposed in the endeavor thus to bring them up, they would rarely choose to place them under the care of the dry-nurse." The high death-rate in asylums and hospitals for foundlings is abundantly suggestive of the dangers attending artificial feeding,—forty, fifty, sixty, and even as high as eighty and ninety per cent. being destroyed. In the foundling-hospital at Vienna the mortality has been as high as 92 per cent.; at Brussels, 79 per cent.; at Madrid, 67 per cent. In the foundling-hospital at Dublin it appeared, many years ago, on inquiry by Parliament, that of 10,272 children sent to the infirmary of the hospital, during a period of twenty-one years, only 45 recovered,—a statement which at this time, as has been remarked, seems almost incredible. A different mode of feeding was instituted. Wet-nurses were employed, and the children sent with them to the country. The

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results were highly beneficial. Under this improved plan, in one year 2168 infants were taken into the house, and only 486 died,—a most marked improvement.

The mortality among artificially-fed children in private practice is not so great as in hospitals for foundlings, although in large cities, and especially among the poor, it would be found to fall only a little short, I fear, if statistics were carefully gathered. When I meet with an infant among the indigent so unfortunate as to be deprived of its mother's breast, I am in the habit of looking upon it as having received its passport to the grave.

As much depends upon the care and attention which children fed by hand receive, we may therefore expect to find, as we do, the mortality somewhat less among the better classes, who have it within their power to supply more nearly the child's necessary wants. I quite agree, however, with Dr. Combe, who says, "We must not infer that, among the wealthier classes at least, nothing more can be done for the preservation of infant health and life. On the contrary, we have too good reason to believe that even among the best-educated classes many lives are cut short by mismanagement in infancy, which might be saved if the parents only possessed in time a portion of that knowledge and practical sense which dire experience sometimes impresses upon them when too late."

We have said that we believe it to be the duty of every mother to nurse her own child; but, as circumstances beyond control sometimes occur to deprive the infant of its natural food, we are then forced to provide nourishment for it; and here I believe it to be the imperative duty of parents residing in large cities to procure suitable wet-nurses, whenever it is within their means to do so. If this cannot be done, we must then look to art to furnish a substitute. I think it would require no labored argument to convince every gentleman present that it is to the milk of some animal we are to look for the best substitute. Milk, whether from the human subject or from the animal, is composed essentially of the same ingredients, the difference being only in their relative proportion. Providence has so beautifully provided for the wants of all creatures, that these ingredients are made to vary in the exact proportion to meet the wants of the young of each particular animal. It is evident, therefore, in providing a substitute for the mother's milk, that we should choose that which most nearly resembles it, or it should be made to do so by proper modification.

By referring to a table of analyses of milk, we see in asses' milk the closest resemblance; but, as this can rarely be procured, cow's milk, on account of the facility with which it can always be obtained, is the one to which recourse is usually had. It is important, too, that the milk should be taken from a healthy cow, at liberty to feed and graze at pleasure,—not stall-fed,—and, if possible, always from the same animal; because, as Dr. Dewees remarks, "different cows feeding upon the same materials often give different qualities of milk, and the stomach very generally becomes reconciled more easily to any one certain quality than to a mixture."

The milk of the cow, being intended to meet the wants of a strong and vigorous animal, cannot be rationally administered to a young and delicate infant, of much feebler digestive powers, without first undergoing some modification.

The difference between human milk and cow's milk, as ascertained by analysis, is as follows. Human milk contains—casein, 32, sugar, 36, butter, 29; cow's milk—casein, 63, sugar, 28, butter, 40. It will be seen from this that if cow's milk be reduced one-half, the casein will be about the same as in human milk, the butter slightly less, and the sugar only one-third of what it should be. In adapting it, therefore, to an infant, the first six or eight weeks it should be diluted with equal parts of water, have added a little sweet cream, and must be sweetened by adding to each six ounces of the mixture about one half-teaspoonful of sugar of milk, or lump sugar; the ordinary brown sugar should never be used, as it contains material which will more readily decompose and give rise to fermentation. After six or eight weeks the dilution need not be so great; one-third water will probably be sufficient. After three or four months the quantity of water may be still further reduced,—say one-fourth water to three-fourths milk. And after six months the milk may be given undiluted. During all this time the quantity of sugar and cream should remain the same. Any change in the dilution of the milk must be made with great care; for we must recollect that we can at the best but poorly imitate Nature in her increase of the casein in proportion to the growing wants of the child.

The rule which I have given will not apply to the milk which is served from door to door in large cities. Indeed, no rule will apply to such milk, for it is always of uncertain quality. Each case must determine for itself the degree of dilution, if any, and the mode of preparation. Notwithstanding the greatest possible care in the use of this milk, we too often find that the child's life will be sacrificed, unless a wet-nurse be obtained or the child removed to the country.

The intervals of feeding should be regular, and the quantity given should also be carefully regulated. For the first two or three weeks, three or four fluidounces every two or three hours will, generally speaking, be sufficient. As the child grows older, this quantity must be gradually increased. At this rate it will be seen that the child is getting in twenty-four hours at least a pint of pure cow's milk,—which ought to be sufficient, if properly digested, to meet its wants at this early age.

The mode of administering the milk is also important. It should always be given in imitation of Nature's way,—by sucking. A child will almost always instinctively suck from its earliest age. By this means it swallows the milk very gradually, and is therefore less apt to overload its stomach. The first show of indifference on its part is a sure sign that it has enough, and it should never be pressed to continue. When it has finished its meal, the bottle should be at once removed; for if permitted to suck at an empty bottle it will swallow air, which will give rise to colic-pains. If any milk remains in the bottle, it should be at once emptied out, and not kept for a subsequent feeding, as it is liable to undergo fermentation. The bottle and all parts connected with it should then be well cleansed and placed in water until required again. If perfect cleanliness be not scrupulously observed, the bottle will soon smell sour, showing that some milk has been left to ferment. Fresh milk added while this remains will turn sour in a very short time. The sugar and water should not be added until the meal is required. The mixture should then be gradually raised to a temperature of 95 to 98 degrees. Should any tendency to acidity be observed in the milk, it should be rejected forthwith. No attempt at its supposed restoration should be made, by the addition of sugar or other agents, as these will eventually but increase the evil.

These precautions may seem minute, and, to some, unnecessary; but I feel that their importance cannot be overestimated. In proportion as they are deviated from, will the risks to the child's life increase. They may also involve some little care on the part of the mother, whose duty it should be to supervise the preparation of the food; but she will be abundantly compensated for her trouble by securing what is most to be desired,—her child's life and health.

At about the sixth or seventh month it may be well

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to give, in addition to the milk, some of the farinaceous articles, such as tapioca, farina, corn-starch, and the like. After the eighth or ninth month a little thin mutton- or chicken-broth may also be added to the diet.

The farinaceous articles are highly improper as food for very young infants, for three reasons,—viz.:

1. Because of their inability to digest them. The conversion of starch into glucose, or grape-sugar, is begun by the saliva and completed by the intestinal juices. Now, the saliva is not secreted in the infant before the fourth month, nor does the intestinal juice of a very young infant seem to have the power of converting starch into grape-sugar, as would appear from the fact that in post-mortem examinations of children who during their lifetime had been largely fed on farinaceous articles, a starchy film has been found lining the intestines, which yielded the characteristic blue color to the iodine test.

2. They do not contain the four classes of food in the proportion required for healthy nutrition,—viz., albumen, fatty substances, carbo-hydrates, and salts; all of which are contained in milk, in the form of casein, butter, sugar, and salts.

3. Supposing them to be digested, starches, and sugars into which starches are converted, have a greater affinity for oxygen than the albuminates have; they therefore tend to appropriate the oxygen which is required to combine with the waste tissues in order to effect their elimination, and they thus impede the proper nutritional changes; or, in other words, they are heat-giving rather than tissue-making materials.

While I regard the milk of an animal as the best substitute which can be furnished to a child in lieu of its mother's milk, it must not be forgotten that it can serve at the best only as a substitute, for it is not, and cannot be made, identical. It would seem, as every variety is composed of the same constituents, only varying in their relative proportions, to be an easy matter to balance these differences and thus make them identical. But it is not so. These constituents have different properties. Take, for instance, human milk and the milk of the cow. Examine their chief nutritive constituent,—casein. It will be found, if rennet be added to human milk, that its casein will coagulate into light, loose clots, formed by the aggregation of little flocculi, which offer no impediment to the feeble digestive powers of the infant, on account of being the most easily digested of all known articles. On the other hand, add rennet to cow's milk, and its casein will coagulate into heavy compact lumps. The same thing takes place within the child's stomach, as may be seen by observing the milk vomited shortly after feeding. I have seen these lumps so large and tough as almost to choke the child when in the act of vomiting them, and have even found it necessary to assist in their removal from its mouth and fauces. They also may frequently be found in its passages, and even in a large and compact mass in its stomach after death. I believe this difference between these two kinds of milk to be so characteristic that we may decide, with a great degree of certainty, whether a child is nursed or artificially fed, simply by examining the ejections from its stomach.

This heavy, dense clot, then, of cow's milk, unlike the light, loose clot of human milk, is more difficult of digestion, and taxes the feeble digestive powers of the young infant to their utmost, which even then are often unequal to the task, permitting some of the casein to remain undigested, which, if not thrown off by vomiting, will speedily undergo fermentation and give rise to acidity and diarrhœa, and, if the error of diet be continued, may lead to more serious results.

Dr. Hiram Corson, of Montgomery County, who claims to have had a great deal of experience in the artificial feeding of infants, condemns very strongly the general practice of feeding them on cow's milk diluted. In fact, his excellent article on "Food for Infants," read before the State Medical Association at Harrisburg in 1868, seems to have been written chiefly for the purpose of condemning this practice. He there says, "I feel quite certain that it is almost as easy to raise children by hand, if they have an abundant supply of good, undiluted cow's milk, as it is by the breast." And again, when condemning the present teaching on this point by the professors in our medical schools, he says, "Rather let students be taught that the higher the organization of the animal the more abundant will be the nutritive constituents of the milk; and, as man is at the head of the animal creation, human milk is more highly organized than that of any other animal. If, then, you wish to use any other milk as a substitute for the mother's milk, instead of diluting it with water, it would be more appropriate to add to it some nutritive substance."

With all due regard to the experience of Dr. Corson, I must beg leave to differ from these views.

Is it a fact that more children suffer and die from insufficient feeding than from overfeeding? I doubt it. There can be no doubt, however, that, if an infant be not sufficiently fed, it will cry, worry its mother, grow sick, and eventually die of inanition. But may it not also be true that a child fed under this high-pressure system may have digestive powers unequal to the demands upon them, and fail to digest this dense mass of curd of undiluted cow's milk, which, if not thrown off by vomiting, will pass the pylorus undigested and utterly fail to meet its wants? If so, emaciation and the same train of symptoms as in insufficient feeding will follow; and finally such an infant will die, too, for lack of nutrition, although daily swallowing food sufficient to supply the wants of two healthy children, if properly digested.

It must be remembered that it is not that which is taken into the stomach that nourishes, but only that which is digested. Many a mother or nurse, ignorant of this fact, seeing that her child artificially fed does not grow properly, or, it may be, is losing its plumpness, will, therefore, infer that something more solid is required. With this view she resorts to one or more of the many vile farinaceous compounds prepared and sold in shops under the name of "food for infants." But, alas for the poor victim of misdirected sympathies! this but adds distress to its discomfort, which, if the error of diet be not corrected, will continue to increase until some kind disease intervenes to relieve it of its suffering.

Rather let mothers and nurses be taught that digestion is essential to development, and that without it a child may actually starve on the fullest diet. The simple introduction into its alimentary canal of large quantities of farinaceous and caseous material is not necessarily followed by a corresponding increase of development. In all cases in which the food of an infant is said to be insufficient, the stools should be carefully examined, and if there be found in them the hard whitish or cheesy lumps, so characteristic of coagulated casein, it will be strong evidence that too much rather than too little is being given.

It is probably true that, in spite of all possible precaution, some infants will now and then be found with whom cow's milk will not agree. Such, it is said, will often do well upon Liebig's food for infants, either alone or mixed with milk, although the milk by itself causes derangement. Before making any change, we should satisfy ourselves that it is the milk which is at fault, and not its mode of preparation.

Cow's milk may be rendered more digestible by the addition of some alkali; lime-water is perhaps preferable. As lime-water contains only about one-half of a

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grain of lime to the ounce of water, it may be largely used in the dilution of the milk. This will in a great measure prevent the formation of those firm coagula of casein so difficult for the infant to digest.

Liebig's food, so popular with many, although a farinaceous compound, is said to be free from one of the objections at least which weigh against such articles in general. It is claimed for it that the malt which it contains converts the starch into grape-sugar, and thus relieves the digestive organs of a part of their labor. Of its practical virtues I cannot speak, as I have never used it.

It may not be uninteresting to pass in review some of the inevitable evils which follow the administration of improper food to infants. Irritation of the digestive organs will necessarily follow. Vomiting is speedily excited and the food rejected. This hint which Nature gives is too often disregarded by those to whose charge they are committed. Food of the same kind is given again and again, and soon the stomach loses in a measure its excitability, permitting a part or the whole of it to pass through undigested. The intestines then become irritated, and, in their effort to get rid of these undigested matters, diarrhœa is excited. The evacuations are often horribly offensive,—due to the decomposition or putrefaction which these matters have undergone. Such an infant would necessarily be expected to lose both flesh and strength; for, besides the weakness resulting from imperfect nutrition, there is the additional cause of debility from the repeated attacks of vomiting and purging, until soon its digestive powers are rendered so feeble that it is less than ever able to obtain any nourishment from the diet with which it is furnished. A child thus erroneously fed often has a voracious appetite, which should be interpreted to mean that the ultimate structures of its economy are not satisfied. The quantity of food that it will sometimes swallow is enormous, and it is a matter of surprise to its attendants that, in spite of all this, wasting continues. It becomes peevish, fretful, and irritable; when awake, it will cry almost incessantly at times from hunger, and then again from abdominal pains; and, to add to its suffering, it is also frequently attacked with obstinate cutaneous eruptions, particularly urticaria and strophulus. That affection of the mouth known as thrush is exceedingly common, and, when it occurs in an infant greatly reduced by a long course of improper feeding, betokens a condition of the digestive organs not at all favorable to the ready digestion and assimilation of food. If an infant of this description, with all power of endurance starved out of him, be overtaken by almost any acute disease, he will fall a ready victim to that which would be but a trivial ailment for a healthy child. Or if he escapes death from this cause, and continues to have supplied to him food which he cannot digest, the result will be the same, only a little longer deferred, as if all food were withheld. He will die of inanition. Or, if able to digest only a part of what is furnished him, his life may linger on, extreme emaciation attends him, his face bears the expression of age, his belly grows large, tubercles may or may not become developed, and, finally, skin and bones, he sinks and dies. A certificate is given of death from marasmus. Or, if the infant be injudiciously fed from his very birth, his miserable existence will be brought to a more speedy end, for such an infant rarely lives longer than three months. He will become so weakened by the vomiting and diarrhœa ensuing upon a bad state of nutrition as to be unable to make sufficient inspiratory effort to fill his lungs, and will die of sheer debility. Or, again, if he be overtaken by the warm weather of the summer season, cholera infantum will almost certainly end his existence. From these four diseases, therefore,—viz., inanition, marasmus, debility, and cholera infantum,—is due, I see by the reports of the Board of Health of this city, about one-half of our infant mortality.

It would be well were the evils of improper feeding confined alone to that class of unfortunate beings that are by necessity deprived of the breast. Many an infant, with a full fountain of milk from which to draw its supply, is needlessly and wantonly stuffed with articles of food not only useless, but positively hurtful, through some mistaken notion or capricious longing for a fat baby on the part of its mother or nurse. It is not uncommon to see children at six months, and at times even much younger, taken to the table with the family and fed upon a promiscuous diet. I need not tell you, gentlemen, that this is a fruitful cause of diarrhœa, convulsions, and a great variety of other diseases among children which we are called upon to treat. For, as Dr. John Clark wisely remarks, "it cannot be that a child's mouth without teeth, and that of the adult furnished with the teeth of granivorous and carnivorous animals, are designed by the Creator for the same sort of food."

By way of conclusion I would add, that as small things portend the danger in the artificial feeding of infants, so do small things go far towards warding it off. A word of advice in time will have the effect of staying death from many a home. The choice of diet and its method of preparation and administration are not unimportant matters, to be left to the judgment of the mother or nurse. Just as much precision is requisite in directing the diet of an infant as though it were drugs with which we were dealing. As these apparently small things, therefore, are observed or neglected, so will the scale of life be turned upwards or downwards.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SURGICAL CLINIC OF PROF. D. HAYES AGNEW.

Reported by Dr. Frank Muhlenberg.

VESICAL CALCULUS.

CASE I.—GENTLEMEN: Of late years this Institution has been peculiarly favored with the large number of cases of stone in the bladder that have been presented for relief by an operation. For class demonstration they are not to the surgeon the most desirable, as the region in which he works must necessarily be a small and comparatively hidden one; so that, except to those occupying a position near him, the minutiæ of the various steps of the operation must be taken for granted rather than seen. It will not be necessary to repeat to-day, except in a cursory manner, the remarks I made at a former clinic on the history of lithotomy and the anatomical relations of the parts involved, for I presume that by this time you are, theoretically, sufficiently acquainted with the surgical anatomy of the perineal region to follow me in the various steps of this operation, with benefit to yourselves. The symptoms of stone in the bladder, which, as I then told you, are of a peculiar nature and somewhat common to bladder-trouble generally, have been all experienced by this little boy now presented before you. This patient, you observe, is quite young, being only six years of age, and is therefore an illustration of the surgical fact that about one-half of all the cases presented are children, and most of these under ten years of age. You will also notice that he is a *white* boy, for it is quite a rare thing indeed to have a negro presented for treatment. He does not reside in this city, but comes from Kutztown, Berks County,—a limestone district; but whether the water he has been accustomed to drink has had an effect in the formation of this calculus I am unable to state, although vulgar opinion would, as you know, favor such a view.

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The symptoms to be observed in forming a diagnosis of this case are of two kinds,—*rational* and *physical*. The *rational* we may also divide into *local* and *general*.

The *local* are these. About three years ago, his parents observed that the desire to urinate was exceedingly frequent, both during the day and also at night, and that when the act was about being completed he cried frequently, as if from pain. He passed about this time a small concretion, and his sufferings were considerably alleviated. For some months past, however, they have returned with redoubled violence, and he now presents all the attending local symptoms of his former attack. In addition to the frequent desire to urinate, and subsequent pain, he has a constant inclination to go to stool, and to remain there, and suffers exceedingly from tenesmus during the act of defecation. There is, notwithstanding, less of that peculiar itching of the penis at its extremity, due to reflex action, which generally is so marked in cases of this character. It very often happens that the constant irritation which is thus induced produces frequent handling of the organ, resulting in an elongated foreskin and general enlargement of the organ, from which frequent priapisms ensue, as in the case we presented at a former clinic.

The *general symptoms* in this case, as is usual with children, are not very marked. His general health has not perceptibly suffered, and we therefore entertain a favorable prognosis.

No surgeon will be, however, or is allowed to be, satisfied with a diagnosis founded merely on rational symptoms, but must verify it by a *physical examination*. This I proceed to do by means of the metallic sound. As a precautionary measure, in order to clear out the large bowel and preclude the possibility of a mass of impacted feces interfering with the movement of the free end of the sound, and also to place him at rest for at least three days subsequent to the operation, I ordered him this morning an enema of soap and water. His bowels have been freely moved. I sounded him about ten days ago, and will, after having his bladder injected with a warm infusion of flaxseed, proceed to repeat the process before you. I distinctly feel the peculiar sensation imparted by the metallic instrument striking against the calculus; and now, having screwed the sounding-board to the handle of the sound, I judge that you also have this unmistakable evidence presented to your senses. While the patient is having the anæsthetic administered, I will merely repeat again that there are two modes of performing lithotomy,—the supra-pubic and the perineal. The first is but seldom practised, and of the latter there are three methods of procedure,—the median, the bilateral, and the lateral, with their various modifications. The last is the one that I much prefer, and it will be done on this patient.

The grooved staff being introduced is held by my assistant, Dr. Charles T. Hunter, hooked close up under the arch of the pubes, its convexity presenting slightly to the left side and the handle to the right. Upon the staff-holder depends much of the success of the operation; for—as I do not use the gorget, but only this bistoury—if he should, from anxiety to assist the operator, push the convexity too far outwards and backwards, the incision might be made along its groove as changed, and an untoward result ensue. I shall now, with this sharp-pointed, long-bladed bistoury, make my incision through the integument and fascia down to the membranous portion of the urethra, commencing on the left side about a line or two to the left of the raphé, immediately behind the scrotum, an inch in advance of the sphincter ani muscle, and extend it in a straight line to a point about half-way between the anus and tuber ischii. I proceed rapidly with the subsequent steps of the operation, not stopping to demonstrate the different layers of fascia, etc., but cutting down through the superficial, middle, and deep fascia and the fibres of the levator ani and transversalis muscles, until I have reached the membranous portion of the urethra. With the forefinger of my left hand guiding the point of the bistoury into the groove of the staff, I push it steadily along its curve and backwards through the prostate gland into the bladder; which incision is followed, as you see, by the gush of its fluid contents.

The next step, now that the viscus is cut, is to secure the stone. I introduce the forefinger of my left hand into the bladder, and, thus holding the sides of the wound somewhat apart, —having withdrawn the staff,—guide along my finger this forceps, held in my right hand. I feel the stone under my finger, and, after carefully seizing it with the forceps, I now present it to you as the result of the lateral operation for stone.

The subsequent treatment of the case will be the following: All débris will be washed out of the patient's bladder, an anodyne of tinct. opii deod. gtt. x administered, and he will be placed in bed with the ordinary folded sheet under him. No catheter will be introduced, but the urine will be allowed to discharge by the wound, and, as this gradually heals, it will seek its natural course. The bowels will be kept closed until about the third day, and anodynes administered pro re nata. The diet must be entirely of a fluid character, and composed of beef-tea, milk, etc. If any traumatic fever ensues, it will be treated on general principles.

[This case was treated subsequently as directed. The bowels were opened on the third day by an enema of soap and water. The urine began flowing by the urethra within a week, and the patient was discharged well, ten days after the operation, having suffered from no untoward symptoms. Time of incision until bladder was opened, twenty seconds; and calculus removed within one minute afterwards. Its weight was twenty-four and a half grains.]

VESICAL CALCULUS.

Case II.—This boy that I present to-day is from Camden, N.J., and is also *white*, but older than the former case, being fifteen years of age. His trouble began twelve years ago, with symptoms of a similar character to those of the former three cases I have had the pleasure of presenting to you. He now complains of a constant desire to urinate, doing so at least a dozen times during the day, and as often at night,—the pain at these times being often very severe, and the stream stopping suddenly while urinating. This pain is present both just before and immediately after the act of micturition. At different intervals he has passed small pieces of gravel. The prepuce is very much elongated, and the penis of a large size for a boy of his years. His urine presents a very muddy appearance, is loaded with urates, but does not give evidence of any disease of the kidneys. I sounded him some days ago, and discovered a stone; and, as a placebo for the constant irritation, I ordered him a suppository, nightly, of ext. hyoscyami cum opii pulv., āā, gr. j, and internally, to change for the time being the character of the urine, the following recipe: ext. buchu fld. ʒj, liq. potassæ, gtt. iij,—ter in die.

For your benefit, I will now sound him again. You hear, gentlemen, the peculiar distinctive sound given only by a vesical calculus. I must remove this by an operation, and that, as in the former case, will be the left lateral one. The subsequent treatment will be also the same.

[The bladder was reached in twenty-five seconds after the first incision, but, owing to the large size of the calculus, as it measured almost two inches and a quarter in diameter, it could not be removed until the incision was enlarged and considerable traction made by the forceps on it. The subsequent treatment of the case was the same as for Case I., and the patient was discharged about two weeks and a half subsequent to the operation, without having had any bad symptoms, except that during the second day some light traumatic fever arose, which soon yielded to an ordinary febrifuge. This calculus was of a flattened oval shape, and measured in circumference 4½ by 4 inches in the direction of its two diameters.]

ST. MARY'S HOSPITAL.

SERVICE OF DR. W. W. KEEN.

TETANUS TREATED WITH ENORMOUS DOSES OF CALABAR BEAN WITHOUT ANY MARKED EFFECT ON THE PUPILS. RECOVERY.

W. H. V., æt. 26, Prussian, farm-laborer, admitted to St. Mary's Hospital, September 25, 1869. Service of Dr. J. H. Grove.

History.—September 10, he was kicked in the belly by a horse. Had severe pain for some days, but received no treatment. On the second day he noticed stiffness of the jaws, and on the seventh day his legs became so stiff that he fell. He was placed in a stable, and lay there for eight days, utterly neglected.

Condition on admission.—When admitted, fifteen days after the accident, he was filthy and wretched beyond description; emaciated; muscles of face, neck, back, abdomen, and all the extremities rigid; opisthotonos well marked; utmost separa-

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tion of the teeth, one-quarter inch; deglutition difficult and painful; articulation indistinct; voluntary movements of limbs possible, but difficult; slight tenderness over the epigastrium; breath exceedingly offensive; no stool for four days; pupils slightly dilated; no marks of external violence.

Treatment.—Purgatives at once; morphiæ sulph., ext. bellad., āā, gr. ⅙, and ext. conii gr. ij, every three hours, and chloroform to the spine, with milk-punch and beef-tea.

September 26.—Pulse, 104; resp., 16; axil. temp., 100° F. Sleeps most of the time, though easily aroused; otherwise no change.

September 27.—Pulse, 108; resp., 14; temp., 98⅘°. Offensive breath perceptible at several feet; muttering delirium; tetanic spasms; urine drawn off. Treatment continued, with potass. chlorat. gr. x and quin. sulph. gr. ij, t. d.

October 1.—Dr. Keen came on duty. Since the 27th he had gradually become worse. Pulse, 120; resp., 11; temp., 100°. Lips livid; but one stool since his admission; delirium and tetanic rigidity unchanged. Treatment changed to ol. tiglii gtt. ss, to be repeated till the bowels were open, and calabar bean, gr. ⅛, in the form of fld. ext., every three hours, each dose to be increased by gr. ⅛, and to be given by Dr. R. W. Hargadine, the Resident Physician.

October 2.—Pulse, 72; resp., 12; temp., 98⅘°. Pupils normal. The calabar bean to be increased gr. ¼ at each dose. Morning dose, gr. ½. Bowels not open, though he has taken ol. tiglii gtt. v.

October 3.—No spasms, but rigidity unchanged. Bowels open. Pupils unaffected. As the quality of the calabar bean used was not certain, some of the tincture (♏viij = gr. j) was obtained from Mr. O. S. Hubbell. Mr. H. made it fresh from some of the beans he had lately imported from Liverpool. They had been used effectively in a number of cases to his personal knowledge, and besides, when imported at Liverpool, some children had died from eating some of the beans found in the sweepings from the ship, as was proven in the trial for manslaughter which grew out of the accident. There was no doubt, therefore, as to the efficacy of the remedy. This tincture was ordered to be given every three hours, the first dose being ♏x, and each subsequent dose being increased by ♏x.

October 4.—Screaming with pain. Taking of the tincture ♏l.

October 5.—Pulse 64 and stronger; pupils unaltered; appetite much better; pain relieved; had a dark offensive stool; urine constantly drawn by catheter; rigidity as before. Taking of the tincture at evening ♏c.

October 6.—Pulse, 60; resp., 17; temp., 98⅘°. Has had none of the tincture since 11 P.M. Pupils dilated; crying with pain in face and back. The medicine was resumed (♏c) at 10 A.M. At 2 P.M., pupils smaller than before, but not yet normal; quieter.

October 7.—There being still no relaxation, the dose of the tincture was rapidly increased to ♏cc every three hours. Evening.—Rigidity somewhat diminished; no opisthotonos.

October 9.—Pupils normal; muscles still rigid; passed his urine voluntarily for the first time. Muscular rigidity being still marked, the tincture had been increased to ♏ccc doses.

October 10.—Pupils slightly contracted; trismus less marked.

October 12.—Much better; sitting up; trismus still marked; pupils normal. Increased tincture to ♏cccl.

October 13.—Walks about; no pain; appetite good; muscles all relaxed. Took a final dose of ♏c this morning.

October 28.—Discharged well. Has stayed to regain his strength.

Total quantity of tincture taken in ten days, ℥xvij, equivalent to 1020 grains, or over 100 grains per diem. At no time were the pupils contracted to less than say four-fifths of their usual size. The notes of this case were carefully recorded by Dr. R. W. Hargadine.

In response to Dr. Ogle's suggestion (*Med. Times and Gaz.*, October 22, 1870, and *Amer. Journ. Med. Sci.*, January, 1871, p. 274) that the temperature possibly increases in all cases towards evening, I append the following table of pulse, respiration, and temperature, for comparison with other cases:

		Pulse.	Respiration.	Temperature.
September	26, A.M.	104	16	100° F.
	P.M.	120	18	101.2
"	27, A.M.	108	14	98.4
	P.M.	104	14	96.2
"	28, A.M.	84	12	99.4
	P.M.	72	10	98.6
"	29, A.M.	68	10	98.6
	P.M.	84	10	96.6
"	30, A.M.	120	10	99.4
	P.M.	120	12	100.2
October	1, A.M.	120	11	100
	P.M.	108	11	100
"	2, A.M.	72	12	98.6
	P.M.	80	10	99.6
"	3, P.M.	76	16	99.2
"	4, A.M.	68	12	96
	P.M.	68	24	98
"	5, A.M.	64	13	97
	P.M.	60	16	98.4
"	6, A.M.	60	17	98.8
	P.M.	68	16	99
"	7, A.M.	66	14	99.4
	P.M.	72	18	98.4
"	8, A.M.	74	12	99
	P.M.	108	14	100.8
"	9, A.M.	84	16	97.8
	P.M.	84	14	98.2
"	10, A.M.	72	14	98
	P.M.	84	14	98.4
"	11, A.M.	96	16	98.8
	P.M.	80	15	97.2

OBITUARIES.

Dr. Thomas Mayo, F.R.S., a distinguished English physician and author, died in Wiltshire, January 13, in the 81st year of his age. He was born in London in 1790, graduated at Oxford in 1818, and became a Fellow of the Royal College of Physicians in the following year, being elected its president in 1857,—a position which he retained until 1862. His predecessor was the celebrated Dr. John Ayrton Paris, author of the "Pharmacologia," "Treatise on Diet," and other valuable works, while his successor was the no less distinguished Sir Thomas Watson, M.D., whose "Lectures on the Principles and Practice of Physic" are familiar to the profession on both sides of the Atlantic. Dr. Mayo was a most active contributor to medical literature, especially in the interesting department of medical psychology. He published, in 1831, "An Essay on the Influence of Temperament in Modifying Dyspepsia, or Indigestion;" in 1838, "Elements of the Pathology of the Human Mind;" in 1847, "Clinical Facts and Reflections;" in 1850, "Outlines of Medical Proof Revised;" and in 1854, a treatise on "Medical Testimony and Evidence in Cases of Lunacy." These were his principal works; but he wrote quite a number of valuable papers on kindred subjects in the medical periodicals of the day, as a specimen of which we may mention his contributions to the *Medical Gazette*, in 1843-44, on "The Impunity of Certain Attempts to Murder," etc.

Dr. Beverly R. Wellford, a prominent practitioner of Virginia, died at Richmond, December 29, in the 74th year of his age. He was highly esteemed both in public and private life, and had occupied numerous honorable and responsible positions in the profession, having been President of the American Medical Association, and also of the State Medical Society of Virginia, as well as Professor of Materia Medica in the Virginia Medical College.

Treatment of Chorea by Ether Spray to the Spine.—Dr. John Rose (*Lancet*, December 10, 1870, p. 813) reports three cases of rapid recovery from obstinate chorea by the anæsthetic ether spray. It was applied along the spine for four or five minutes at each time, and effected a cure after fifteen sittings. In obstinate cases he proposes to shave the occiput, and apply the spray there as well as to the spine.

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EDITORIAL.

MORAL EPIDEMICS.

NUMEROUS are the histories, both general and special, which tell us of the rise and fall of nations, the origin of creeds and systems of philosophy, phases of civilization, and extravagances of fanaticism; but there is still wanting a history of the human mind which shall give, among other things, a clear picture, if not an explanation, of the moral commotions and upheavals that agitate at one time an entire community, at another a whole people, or even many peoples, who have no sameness of interests or previous sympathy for each other. The character, magnitude, and extent of these sudden outbreaks are utterly disproportionate to the causes assigned, and demand fresh inquiry and study into the workings of the sentiments and propensities which constitute man's moral nature, under what may be termed epidemic influences. In speculating on the etiology of those wide-spread diseases or epidemics which affect the physical man, it is common to speak of a peculiar constitution of the atmosphere as a cause; but in what this peculiarity consists we are ignorant, as it is not appreciable by our senses, nor measurable by known instruments or tests. To suppose, with some writers, a conjoint action of earth and air,—an exchange of subtle agencies, electro-magnetic and what not,—by which the organism is affected in an abnormal manner, will not aid us in a solution of the problem. Can we go any farther in our study of the causation of moral epidemics? The mystery may be lessened by our admitting that in them the diffused morbid agency or motive power spends its force on the nervous system,—the brain and senses, which are functionally deranged, just as in epidemic cholera the digestive apparatus, and in influenza the respiratory organs, are the chief sufferers. Still, we must content ourselves with a bare knowledge of the fact that mental resulting from cerebral excitement of a peculiar kind becomes epidemic. There is, however, much left for the medico-philosophical historian in collecting and arranging the details of the circumstances which preceded, accompanied, and immediately followed this moral disease, so far as they were manifested in the social, political, and religious movements of the people during the entire period. Due notice must be taken also of the physical influence of climate and seasons, and of the food and manner of living at the time. Some data of this kind have been contributed by Cæsar in his account of the Gauls and Batavians, and by Tacitus in his description of the Germans; but they fall short of explaining the impelling motives for the irruption at irregular intervals of those immense swarms from the northern hive, by which Rome in the time of the republic, and subsequently, with more disastrous results, under the empire, was assailed. In what a comparatively short period did the followers of Mohammed and the believers in the Koran propagate their faith and make themselves masters of Middle and Western Asia and Northern Africa! The epidemic wave spread itself over these countries with a force and speed not to be explained by the ordinary means of conquest and political combination, and it spent itself without being followed by another. Idolaters, Jews, nominal Christians, all succumbed to the mysterious power which, for a time, threatened to overrun Central Europe as it did Spain.

The most remarkable moral epidemic on record is that of the Crusades, in which Europe threw herself on Asia in a spirit of the wildest excitement and passion, commonly attributed to religious enthusiasm and fanaticism. But in reality it was an outbreak of mingled feelings, in which the love of change and adventure, a desire of the people, everywhere moving with slow and uncertain steps in the mists of ignorance and superstition, to escape from feudal tyranny and priestly domination and to revel in the storied riches of the East, was as influential in the minds of those who enlisted under the banner of the Cross as an eagerness to get possession of Jerusalem and to drive away the profane despoilers of the Holy Sepulchre. The preaching and exhortations of Peter the Hermit did indeed rouse into active display the religious zeal of those of knightly degree, as well as of others of elevated piety; but the response in seeming earnestness was also made by large numbers of crazy fanatics and wretches bent on rapine. Different from epidemic diseases in general, in which the poor, the destitute, and the profligate are the earliest victims, this moral epidemic spread from the higher classes to the lower, as might have been anticipated when we look at that part of the organism, the brain with its moral faculties, which would be the first to be called into activity by the appeals made and arguments used, and would also be more susceptible to such appeals in persons of intelligence and higher social rank than in the ignorant masses of the people. Fuller, in his quaint language, well describes the strange medley of adventurers who joined the crusading armies. Notwithstanding the disastrous results of the successive expeditions sent out to free the Holy Land from Mohammedan rule and tyranny, they served to exhaust for a time some of the impurities of the moral atmosphere, and brought back with them materials for advancing civilization. So we find that after ordinary epidemics—as, for example, cholera—there is often, for some time, a diminution of the death-rate from current diseases.

Another memorable period of a moral epidemic was that of the Reformation, and the changes and commotions, social and political, and the wars with which it

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was associated. Great was the agitation in men's minds, fierce and bloody the encounter between Catholic and Protestant rulers and people; and yet the epidemic influence did not the less expend itself before the expiration of the century in the first quarter of which it began, and the lines were drawn between the countries professing the two creeds, which have undergone little change since, notwithstanding the zeal and powerful machinery of both sects for making proselytes.

The first French Revolution—that of 1789—cannot be measured by any ordinary ethical and political standard. Its provocations have been fully and carefully recorded; but whether we look, in amazement, at the sudden upheaval of the entire frame-work of French society and institutions, the popular excitement marked by the wildest atrocities and the most heroic self-sacrifices, or the spread of republican fever to other parts of Europe, we cannot but regard the whole marvellous series of events as a great moral epidemic, the like of which can occur again only in a general subversion of the thrones of Europe and the establishment of republican governments in their stead.

The American Revolution and its war of independence cannot, we think, be looked at in the light of a moral epidemic: they were the determined assertion and defence of privileges previously enjoyed, and an extension of the right of self-government. Quite different was the war of attempted secession, which was the product of a violent moral epidemic,—a hostile and concerted outbreak of long-cherished and inherited feelings and prejudices, to repel what was believed to be a systematic attack on an institution which the people had always regarded with peculiar favor, as a source of power, a producer of wealth, and a supporter of class privileges. Nor were they less passionately earnest in sustaining it, in face of the adverse sentiments of the greater part of the civilized world. The future historian cannot fully describe this war unless he embrace in his picture its striking features of moral commotion, as well as the physical disorders to which this commotion gave rise.

At the present time, in the war between France and Prussia, we see the melancholy and destructive effects of a moral epidemic of national hatred and revenge, which only wanted an exciting cause, were it ever so trivial, to bring grief and wailing and enormous losses of life and treasure to the inhabitants of both countries, —the conquering and the conquered alike. The French people had been long taught to believe that they were bound, at the first opportunity, to retort on the Prussians for the defeats and indignities inflicted on them by the latter in the campaigns of 1814 and 1815, forgetting all the while that in previous years the French armies had overrun Prussia, occupied its capital, and treated it as a conquered province. Both nations might, in fact, have cried quits, and buried all their animosities. But this morbid predisposition of the public mind, in place of being soothed by lessons of peace and forbearance, was played upon by orators, journalists, and publicists, who would make patriotism consist in hatred of the people of other countries rather than in love for their own. Ambitious longings of the French were also encouraged by the same bad advisers for the restoration of the former boundary of the Rhine between France and Germany, and the consequent reacquisition of territory by the former. It was, therefore, an easy thing for the Emperor Napoleon, instead of allaying these angry and disturbing impulses, to give them concentration and hostile direction, and to plunge the French nation into a war with Prussia, contrary to all the dictates of justice and honor. The moral epidemic, so long impending, has broken out with fearful violence, and the people and armies of the two countries have been, for many months, under a pestilence-working cloud worse than any that ever shed its malign cholera influence on the inhabitants of the earth beneath.

A clear lesson, deducible from our brief notice of moral epidemics,—the principal ones only of which we have mentioned,—is the necessity of an enlargement of the sphere of duties of the philosophic physician, a true follower of Hippocrates, the moralist, the preacher, and the statesman, which would require their constant watching of the public mind, and applying correctives to national prejudices and hatreds while these are yet in their formative state. Dehortations against war and its concomitants, rapine and cruelty, must always be commended; but of still greater moment should be the discouragements held forth against the nursing of prejudices and an extreme sensitiveness to imaginary insults under the workings of which a people sometimes snatch at an excuse for war. It cannot be expected that the whole population of a country should be put under a cooling regimen, and lose a little blood from the arm, for the purpose of reducing the national fever; but derivatives might be usefully employed which would turn public excitement into the walks of peaceful ambition, by the cultivation of the arts and sciences, and the erection of public works, useful and commemorative. At any rate, it would be very desirable for rulers of the state and other members of the government—legislators, and especially political orators and agitators—to submit themselves, in seasons of threatened moral epidemics, to a dietetic course, in which artificial stimulants, and particularly whiskey, should find no place. Voltaire wittily said that wars have been brought on because a minister of state could not procure a stool. Some years back, at a time when the question of boundary between the United States and Canada was warmly discussed, a war speech which alarmed the whole country was made in Congress by an eminent political leader and orator, who was intoxicated at the time.

The subject is fruitful in suggestions for a higher standard of public morals and a better-understood code of international ethics. The pen and the pulpit must work together for a thorough indoctrination of the people in the same line. By these means moral epidemics would be either prevented, or, occurring, would lose much of their virulence.

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OPEN DOORS.

"Shut the door after you,
And you'll never be chid."

WE have nearly all of us in our younger days heard the old rhyme the last verse of which heads our article; and, however much we may have been obliged to obey the moral teachings of the first verse, the second was no less strenuously insisted on by our elders. The first, or at least its sense, antedates, in all probability, the creation of doors; but the latter sprang up, we doubt not, when immense fireplaces and huge chimneys were chiefly means for the consumption of fuel, and served but little purpose as heat-giving agents. At that time, when passages freely communicating with the outer air lay just outside each room, no doubt the opening of the door added greatly to the discomfort of those whom the room contained; and, as ventilation was already well secured, there was good reason for complaint if any among the younger members of the household forgot to see that the latch closed fairly upon his impetuous footsteps.

Much later than those days even, and within the memory of many of our readers, when ventilation was secured by the open fireplace, and when the labors of Franklin and his cotemporaries had succeeded to a great extent in causing a large proportion of the heat from the fire to influence the temperature of the rooms, the entries were still cold, as indeed the sleeping-rooms were apt to be,—bitter cold; and it was still of great and real importance that those apartments in which the day's work was to be accomplished should be kept at a proper standard,—a result impossible to be reached unless the prescription of our old stanza was insisted upon. But now—we have of course a complaint to make—all that is changed, partly for the better, but we fear, also, for the worse, to a great degree.

While in our early days the constant transitions from moderately warm rooms to very cold entries were, no doubt, a strain upon the weaker ones, this, to a certain extent, must have been combated by the free ventilation which the fine old fires with gum back-log and hickory back-stick under the wide-throated chimneys enabled us to have. To help matters, too, the Knott stove came in, and the entries grew perceptibly warmer. So the old saw held its own, and did no harm.

Now, on the contrary, we believe it does great harm. To obey those in authority is an excellent—a most excellent—lesson for us all to learn; but we have no longer faith in our versicle as a whole, and for this reason.

Most of our houses—or at least a large proportion of them—are heated by a furnace, even if all the warmth is not derived from one. Open fireplaces, it seems to us, are becoming rarer and more rare, and with them disappears a most efficient means of ventilation. We will not stop here to lament this as a great loss to us in a social point of view, this depriving the family of the *focus* to which its various members may come,—the hearthstone, so dear to all who have had a real one,—though we believe it to be a great loss; but we will urge it as a reason for throwing open more freely the doors of communication between entries and rooms. Since furnaces have been so generally introduced, entries and passages can be, and are, kept much warmer than was possible before,—quite warm enough, if not indeed too warm, for health,—and there need no longer be the risk of unduly lowering the temperature of the rooms in which we live, by leaving the door open behind us. Besides, windows shut closer, and, as towns increase in size, the outer cold has less effect upon in-door temperature; and, what is of far greater moment, ventilation, in too many modern houses, must be secured through the entries, or not at all. Fresh air, it is true, is poured into the rooms from the furnace, but egress for that which is vitiated is not provided, and it must pour out through cracks, or remain. Of course, if we could wait it would pour out. Fresh hot air coming in would gradually completely purify the room, which would attain a temperature of over 100° F. But we cannot stand it: so we shut the register, and put an end to ventilation and temporary discomfort together. Very few houses, however, have means for throwing as much hot air into their entries as into the rooms, so that not only are the latter filled with vitiated air, but actually, in spite of all the modern improvements, the entries grow cold; more coal is thrown on the furnace, its upper door is shut, and very little is effected.

Now, if we would only accustom ourselves to open doors, we would certainly have better ventilation in the rooms, and warmer entries, while both rooms and entries might be kept at a temperature of 68° with much less trouble than is now expended in bringing rooms "up to 70°."

Where there are children, it is, we think, of great importance that rooms and entries should be of the same temperature, for certainly a large proportion of the chest and bowel affections of the young can be traced among certain classes to an exposure to a change in temperature, especially where the little ones are in the habit of passing from overwarmed rooms into somewhat underwarmed entries.

There is no need to dilate on the necessity of ventilation to young and old; but even where stoves are used, and a certain ventilation is thus afforded, our remarks hold true, for there is no doubt that all ordinary modes of burning anthracite coal pour into our rooms so much of the inodorous, tasteless, poisonous carbonic oxide, that we can hardly have too much air with which to dilute it.

So we put in a plea that instruction be given to our young folks somewhat different from that which their forefathers received. Teach them by all means to be obedient and docile, but forgive them if doors be left ajar; nay, more,—teach them to leave them open.

HONORS TO MEDICAL MEN.—Dr. Sigmund, well known as a syphilographer, and Dr. Hermann Beigel, the laryngoscopist, have been honored with the order of the Iron Cross. Of the latter it is said that decoration was bestowed for personal bravery on the field of battle.

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CORRESPONDENCE.

MICROSCOPICAL MEMORANDA.

BY DR. NEWLENZ.

AT the close of the late war, having been brevetted lieutenant-colonel, through the untiring efforts of the member from my district, and being therefore desirous of contributing to the reputation and usefulness of some of the learned societies, I applied for admission to the Royal Microscopical Society, among others. National jealousy, probably, caused the rejection of my application, and the result was that I formed a society myself. This society has devoted itself exclusively and earnestly to histology, pathology, test-objects, the cryptogamic origin of disease, spontaneous generation, germinal matter, bacteria, and cells* in general.

Having constructed a one-seventieth immersion objective, on a new principle, having 191° aperture,—the immersion liquid being fluoric acid,—and, for illumination, having invented a new eccentric parallelopiped, to be used with fluorescent rays exclusively, some remarkable results have been obtained.

I take great pleasure in stating that, with regard to test-objects, all previous observers have been totally wrong in every particular, and that *Pleurosigma angulatum* is, in the first place, constructed on the plan of the Nicholson pavement, and, in the second place, that it is not a Pleurosigma at all.

The most certain test-object is the *Newlenzia difficilissima*, a very rare and remarkable diatom, in which my one-seventieth with the parallelopiped shows four kinds of beads and six sets of cross-lines, one of which sets contains 147,229,073 lines to the inch: hence, by the well-known formula of Brewster, $\frac{d.x}{d.u} = \sqrt{o.x.\rho.y}$, it is impossible that the undulations of light should pass without being previously deflagrated, and therefore no other lens can possibly show these lines, nor is it probable that this lens would with any other observer. The immense superiority of this test to Nobert's plate is apparent.

Reserving this topic for future discussion, I have a few words to say with regard to spontaneous generation and cryptogams. With regard to the former, the true theory was declared in 1740, in "Lucina sine Concubitu,"—a most valuable and rare work, which seems to have been overlooked by recent writers on this subject. The author, starting from the proposition of the ancient philosophers, "Non potest reperiri avesne vel ante ova generata sint, cum et ovum sine avi, et avis sine ovo gigni non possit," proceeds thus: "Je n'hésitai donc plus à regarder ce vent . . . comme le véhicule propre pour ces embrions flottans. . . . Sur ces principes, je vins à bout de fabriquer une machine,—*Cilindrico-catoptrico-rotundo-concavo-convex*. . . . Cette machine fut lutée hermétiquement d'une terre électrisée, et je le plaçai dans une position convenable vers l'Occident pour intercepter les animalcules flottans dans cette partie prolifique du ciel. . . . Je découvris clairement que ces germes étoient des petites femmes et des petits hommes exacts dans leurs membres."

It will be seen that the machine above referred to prefigured the aeroscope of Pouchet, the isolation apparatus of Hallier, and several other modern inventions. One American and one English observer seem to have entered fully into the spirit of the above-mentioned work; and I desire to offer to them the assurance of my unbounded admiration for the power of their faith and the vigor of their imagination.

The following experiments, conceived in the spirit of their method, will be found interesting:

Exp. 1.—A glass flask was filled with ditch-water, and boiled three days in a Papin's digester, under a pressure of four atmospheres. After a week it was opened, and in the first drop of the contents was found the remarkable animal shown in the accompanying sketch.†

Bacteria were abundant.

Exp. 2.—Some of the fluid contents of an ovarian tumor (a remarkable case, removed by myself through the perineum, of which I shall give a full account in my report to the American Medical Association on Perineotomy) was examined by fluorescent light. It was full of spontaneously-generated corpuscles, starch-fibres, and cotton granules, with many invisible germs.

Exp. 3.—Two ounces of water, containing, among other things, *Gemiasma*, *Euglena*, *Podura nivalis*, *Micrococcus*, *Cryptococcus*, *Arthrococcus*, and an entirely new and original coccus,—viz., *Newlenziacoccus*,—were drunk, by mistake, by a friend of the author. For twenty-four hours he was afflicted with a conglomerated epidemic which presented nearly every symptom described in Da Costa's Manual. Cryptogamismus is the only appropriate term for his condition.

My most remarkable discoveries, however, have been in the blood. Space is wanting to enumerate here the many forms of Coccus, Algæ, and Rhizopods that I have found in the blood, *when the proper conditions of observation were afforded.*

I can only say here, in conclusion, to the numerous persons who have written to me on this subject, that a minute investigation with the one-seventieth and the parallelopiped requires much labor. I always give at least an hour to each specimen; and, as I have had to examine over twenty thousand specimens within the last year, I am compelled to state that, in future, unless fifty dollars are sent with the drop of blood on which I am to furnish diagnosis and treatment, I shall not notice it.

IMMERSION HALL, February 2, 1870.

NOTE FROM DR. J. G. RICHARDSON.

TO THE EDITOR OF THE TIMES.

DEAR SIR:—The rare candor and fairness which characterize your review of my paper "On the Cellular Structure of the Red Blood-Corpuscle," in the last number of the *Medical Times*, embolden me to trespass upon your valuable space. I desire to allude briefly to one of the minor points among my observations, which doubtless has been overlooked,—viz., that recorded on page 10, to the effect that blood-crystals of the menobranchus when partly dissolved could be seen to move rapidly, and as if with perfect freedom, in various directions, between the nuclei and external borders of certain corpuscles. This fact appears to my mind much more consistent with the hypothesis of a cell-wall enclosing fluid contents than with the doctrine of a homogeneous jelly-like constitution (Beale), or the theory of a crystalloid element "contained in an albuminous frame-work of paraglobulin" *firm enough to preserve the shape of the red disc* (Brücke, Stricker); and it

* *Sic*,—not sells.

† The sketch is necessarily omitted. It looks remarkably like *Pediculus capitis*.—ED.

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seems to me the indication furnished by this circumstance resembles in kind the evidence which sudden dartings of a gold-fish across his vase would be that *he* was not imbedded in jelly or entangled within a net.

Fully recognizing, however, the wisdom of your caution against considering any one series of experiments (or, I may add, indeed, any one man's unaided observations, however numerous) as "conclusive proof," and trusting, therefore, that these researches will lead others to investigate the subject and correct or confirm my results,

I am, very respectfully, yours, etc.,

JOSEPH G. RICHARDSON.

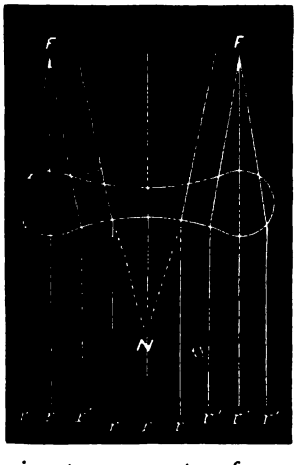
1620 CHESTNUT STREET, PHILADELPHIA.

TRANSACTIONS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION, ACADEMY OF NATURAL SCIENCES.

CONVERSATIONAL meeting, January 16, 1871, J. H. McQuillen, M.D., in the chair.

DR. TYSON asked the attention of the section to a simple diagram which he has been in the habit of using in his lectures for the purpose of impressing upon students the circumstances under which the reversal of lights and shadows takes place in red blood-corpuscles during microscopic examination. The familiar "cracker"-shape of the red corpuscle being acknowledged, it is plain that the *central* portion is a *double-concave* lens, while the periphery will act as a *double-convex* lens. The centre of the corpuscle will therefore cause the parallel rays *r, r, r* to disperse, and to pass beyond the corpuscle, diverging, as though coming from the negative focus *N*, which is the point to be focussed by the object-glass to make the centre bright. But to do this, the object-glass must approximate the corpuscle; hence it becomes "within the focus" for the entire corpuscle. But when this is the case, the periphery of the corpuscle is out of focus, and therefore dark, because, acting as a double-convex lens, it causes the parallel rays *r'*, *r'*, *r'* coming from the mirror to converge to a focus at the point *F*, above the corpuscle. Now, to make the periphery of the corpuscle appear bright, the point *F* must be focussed. But to focus this, the object-glass must be removed *from* the corpuscle, since the rays must again diverge before they can be made to form an image, and in so doing the object-glass is placed "beyond the focus." When this is the case, however, the centre is no longer in focus, and therefore appears dark, while the periphery is bright. In the opposite position, or when the objective is "within the focus," the *centre* is *bright* and the *periphery dark*.



This diagram can easily be carried in the mind's eye, and at once the facts can be thought out without burdening with their recollection the memory, which is here peculiarly apt to be treacherous. Indeed, the speaker said, he could never himself promptly recall the circumstances under which the centre had been bright and the periphery dark, and *vice versa*, until he had called to his aid this diagram. And that the exact truth is liable at least to escape attention, is seen in the circumstance that in a volume no less highly valued than the seventh edition of Carpenter's Human Physiology, 1869, is contained a misstatement of the facts. We find here, on page 200, the statement that the corpuscle is *rather beyond* the focus of the microscope when the *periphery* is *dark* and the *centre bright*, and *within the focus* in the opposite appearance,—that is, when the *centre* is *dark* and the *periphery bright*. The reverse is correct. In the last edition of Carpenter (1868) "On the Microscope," however, pages 166–167, we find the principle applied, and the fact correctly stated, though a few lines farther we find it asserted that the hexagonal areolæ in diatoms appear *dark* when the surface is slightly *beyond* the focus, though they are described as hexagonal *elevations*. If this latter be the case, then *they should appear dark when within the focus*, as is the case with the periphery of the corpuscle. So, too, on page 710 of this latter volume there is reproduced the same drawing referred to in the text-book on physiology, but with the description reversed, and therefore correct. The corpuscle is, however, described as in focus when the periphery is in focus, whereas we have presumed that the entire corpuscle is in focus when there is least shadow. Of the other text-books now within our reach, Dalton has it correctly on page 214 of his third edition; Flint, Kirke, Ranke in his "Grundzüge der Physiologie," and Rollett in Stricker's "Handbuch der Lehre von den Geweben," refer to the reversal of light and shadow, but do not state the circumstances under which it takes place; Marshall makes no allusion to it.

MR. HUMPHREYS wished to know what was Dr. Tyson's opinion as to whether the markings upon diatoms were convex or concave.

DR. TYSON stated that he could not speak from personal knowledge as to the facts, but believed that Dr. Carpenter's view as above stated was most generally received.

DR. MCQUILLEN exhibited five microscopical specimens, prepared by Dr. George D. Harriman, of Boston. They included sections of bone and of the dentine and cementum of teeth. All had been acted upon by dilute muriatic acid, removing the earthy salts and leaving the organic basis of which those structures are composed, and were finally stained by carmine. These specimens had been prepared by Dr. H. with a view of demonstrating that dentine does not consist of tubular and intertubular structure; also, that in cementum and bone the lacunæ and canaliculi are not empty spaces, but occupied by a soft, solid substance.

JOSEPH G. RICHARDSON, *Recorder*.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY.

AT a meeting of the Pathological Society, held Thursday, January 12, 1871, John Ashhurst, Jr., M.D., in the chair, Dr. R. M. TOWNSEND presented a *tumor of the upper third of the humerus*, removed from a subject in the dissecting-room. The mass accurately adapted itself to the space between the acromion and the coracoid processes of the glenoid fossa of the scapula, and then expanded into an ovoidal tumor which covered the upper third of the humerus. The subject from whom the specimen was procured showed marked deformity of the thorax, with flattening of the head of the left femur and displacement backward upon the dorsum of the ilium. The tumor was firm in consistence, and to the eye resembled a mass of suet. On section, the roughened end of the humerus was seen perforating the lower portion of the mass; a section of the outer portion resembled a section of the corpus striatum or medulla oblongata. Of the head of the humerus nothing was left but a shell.

The specimen was referred to the Committee on Morbid Growths, who reported (January 26) that it presented the elements of a well-marked cancer. Sections from the periphery show the well-known characteristics of schirrus,—viz., a dense network of fibrous tissue, into the interspaces of which are crowded small, irregularly-shaped, nucleated cells of epithelioid habitus. In the interior of the growth, in the space formerly occupied by the marrow of the bone, is a soft granular

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mass, exhibiting beneath the microscope large epithelioid cells, among which were interspersed numerous mother or giant cells.

DR. S. WEIR MITCHELL exhibited the *sciatic nerve of a rabbit, in the sheath of which were developed, after irritation, multiple abscesses.*

The rabbit, a female, was inoculated with hydrophobic saliva in October, 1869. June 27, 1870, the right sciatic nerve was exposed and frozen by a rhigolene jet several times. June 28 this was repeated. These operations were followed in each instance by loss of power for a day or two, when the limb recovered its full force. By July 13 the whole of the hair on the right hind leg fell off by degrees. At this time sensation and motion were normal. September 12, hair nearly all replaced. A loose ligature was carried around the left sciatic nerve. Within a week there was increasing loss of power, and at length total palsy. The ligature came away between September 29 and October 12, and the wound healed readily. During the winter this rabbit became paraplegic, and was killed and examined two weeks ago by Dr. Wharton Sinkler.

Dr. W. W. Keen studied the condition of the nerves, which I have verified. The right sciatic is healthy, and has no trace of the congestion caused by freezing. The right side of the spine was, however, congested in spots, and for some lines is altered in color, being gray and semi-transparent,—probably affected with sclerosis. The left nerve is traced on to a large tumor, over which its fibres spreading are lost. To this succeed other masses, and close to the point of exit from the spine we see on these masses the nerve-fibres, which spread over it on emerging from the spine. Between the first and the remotest of these growths the nerve could be seen at two points between two of the tumors, but elsewhere it was lost to view.

All of the nerve-fibres were in a state of profound alteration, and the axis cylinder tube was not merely constricted at points, but was in places enormously dilated by what seemed to be enlargements of the axis cylinder. I have never seen elsewhere this remarkable appearance.

The masses in question the doctor presumed to be a form of neuroma. They are fibrous sacs, containing the whitish-yellow granular and molecular cheesy substance, with rare corpuscles, which in the rabbit represents pus. They were certainly developed in the nerve-sheath. In hundreds of experiments on nerves he has met with no such occurrence, and has rarely been able to cause neuritis, which in man is probably much more common.

Thursday, January 26, 1871.—The President, John Ashhurst, M.D., in the chair.

DR. C. B. NANCREDE presented, for Dr. Geo. A. Rex, *a double ovarian tumor*, removed post-mortem from a woman aged fifty-three years, whose mother is also said to have perished with an ovarian tumor. The patient first noticed a tumor in the left ovarian region about the time of the cessation of her menses, eight years ago. The tumor steadily increased in size, and has been accompanied at intervals with more or less ascites. The tumor appeared on the right side.

On January 18 the operation of paracentesis abdominis was performed by Dr. H. Lenox Hodge, with a view of affording relief and aiding a diagnosis, when three gallons of a dark bloody serum were removed. Though relieved by the operation, she gradually sank, and died January 25. The tumors were removed thirty-eight hours after death.

The specimens were referred to a special committee, consisting of Drs. W. W. Keen, W. F. Norris, J. Ewing Mears, and W. F. Jenks, who reported, February 9, as follows:

"The specimen consisted of the uterus, both ovaries, and a part of the bladder. It resembled very much a pair of saddle-bags, the uterus being the thick connecting band between the two large ovaries.

"The muscular wall of the bladder was thickened, and the mucous membrane reticulated from bands of hypertrophied muscular tissue underneath it.

"The uterus was dragged up by the left tumor, was partly spread out on its surface, and partly formed the thick, short band connecting the two tumors. Its canal was 3½ inches long. On opening it, a small polyp, somewhat larger than a pea, was found on its posterior wall, and a small intra-mural tumor existed to the right. The two Fallopian tubes were perfectly easily followed on to the tumors. The left one was flat and ribbon-like, about of the normal calibre, except at its entrance into the uterus, where it was considerably dilated. The right tube was quite small at its uterine extremity, but soon dilated into a long, thin-walled, dark-colored cyst, about a half-inch in diameter at its largest part. The fluid contents of the cyst were slightly brownish, and exhibited a few compound granule-corpuscles and epithelial cells undergoing fatty degeneration, with a little granular débris.

"The two ovaries measured in their longest (perpendicular) circumference, respectively, the right 28½ inches, the left 22 inches, and in their transverse circumference the right 19 inches, the left 22 inches. They were multilocular, and lobulated by numerous and tolerably large endogenous cysts. These cysts formed the main mass of the tumors. In front of the right tumor were some exogenous cysts. The most noticeable feature, however, were a series of apparently condylomatous growths or fringes, which were attached especially at the right lower corner of the right ovary and the two upper corners of the left ovary. These consisted of chains of small hard masses, of sizes from a pin's head to a chestnut, attached to the tumor sometimes only at one end, sometimes growing in masses from it. They were generally of a yellowish-white color, though one or two of the masses were reddish and flesh-like. All were exceedingly hard, and to the finger resembled cartilage. At one point some calcareous matter had been deposited. When a section was made through these masses for purposes of microscopic examination, it was found that they consisted of quite small cysts with very tough, thick walls, in every instance. The contents of the cysts were of the same character as the ordinary ovarian fluid,—viz., compound granular corpuscles, small round cells in fatty degeneration, and granular débris. No cholesterine was found. The lining membrane of the cysts was coated over with small, round epithelial cells, and in one instance we found cylindroid ciliated epithelium. The walls of these cysts consisted of dense fibrous and connective tissue, whose nuclei were plainly visible. Intermingled with these at some points were small collections of round cells, of no determinate character, which we judged to be the beginnings of proliferation of the connective-tissue corpuscles, and probably of new cystic formations. Of cartilage we were never quite certain that we had any positive evidence.

"The contents of the large ovarian cysts presented the usual characteristics.

"The condylomatous growths or fringes it is impossible to consider as cysts which have grown up from within by inclusion, as a result of the fusion of various neighboring dendritic outgrowths, but rather as small cysts developed in the neighboring connective tissue in the vicinity of the tumor, which itself may have acted as a centre of irritation. They have been subjected to friction, pressure, etc., and thus their walls have become dense and thick."

Signed by the committee.

REVIEWS AND BOOK NOTICES.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by the Royal Medical and Chirurgical Society of London. Second Series. Vol. LIII. 8vo, pp. lx., 305. London: Longmans, Green, Reader & Dyer, 1870.

(Concluded from page 183.)

We shall next invite attention to the medical papers.

Experiments on the Action of Certain Diuretics on the Urine in Health. By F. B. NUNNELEY, M.D., Lond., Assistant Physician to the Victoria Park Hospital. Communicated by JOHN ERIC ERICHSEN, Esq.—Dr. Nunneley's experiments

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were made upon himself, and with the following diuretics,—citrate and acetate of potassa, sweet spirit of nitre, and oil of juniper,—for the purpose of ascertaining their influence on the water, urea, and solids of the urine in health.

If these substances are found to act as diuretics in health, they probably act by themselves on the kidney; but if, on the other hand, they do not possess this power, their diuretic power in some diseases attended by anasarca is probably owing in part, at least, to the *changed* condition of the blood and of the whole secreting structure of the kidneys comprised in the idea of disease. The conditions of diet and exercise observed in each set of experiments were of course precisely the same. The urine was tested daily, not merely at the time when the medicines were being taken, but also before and after this period. The experiments resulted as follows:

Citrate and acetate of potassa and nitrous ether actually reduce the urinary solids, while they slightly increase the water; and oil of juniper increases the solids, while it slightly lessens the water. These results show that the action of these medicines (with the exception of oil of juniper) as diuretics in health is very uncertain.

On the Anatomy of a Case of Molluscum Fibrosum. By C. HILTON FAGGE, M.D.—The conclusions arrived at, not only by Dr. Fagge, but also by Mr. Howse, as to the nature and seat of Molluscum fibrosum, are as follows:

1. That each tumor is originally developed round a hair-follicle, enclosing at the same time the sebaceous glands belonging to the follicle.

2. That the smaller tumors consist of two distinct elements,—a central glandular body, itself surrounding a hair, and a peripheral mass of very fine connective tissue, containing numerous minute oval nuclei.

3. That the glandular body is a sebaceous gland, enlarged by the separation of its sacculi from one another, and perhaps also by the actual multiplication and increase in size of the sacculi themselves.

4. That the peripheral mass of nucleated connective tissue is developed from the two external layers of the dermal coat of the hair-follicle and sebaceous glands.

These views, if they should prove to be applicable to all cases presenting similar characters, have the advantage of reconciling to a great extent the discrepancies in the opinions maintained by previous writers. Indeed, the observations of Förster, who, in common with many of his countrymen, regards the disease as consisting simply in the development of scattered fibrous tumors indifferently among the layers of the cutis, are the only ones which Dr. Fagge regards as absolutely opposed to his own. A colored plate accompanies this paper.

On Certain Morbid Changes in the Nervous System, associated with Diabetes. By W. HOWSHIP DICKINSON, M.D., etc. etc.—This paper contains the description of the post-mortem appearances in seven cases of diabetes, which may be condensed as follows:

Peculiar morbid changes were constantly found in the cerebro-spinal system. These were, in all the cases, of the same nature, and in all occupied a similar situation. The earliest alterations recognized consisted in a dilatation of the blood-vessels, particularly of the arteries, with accumulation and frequent extravasation of their contents. The next was a degeneration of the nervous matter immediately surrounding the vessels; and this degenerative process occasioned excavation of tissue, cavities being thus produced which were often large enough to be striking objects even without the microscope. As to their situations, the changes occurred in constant association with the arteries. They were found in every part of the spinal cord and encephalon, attaining their greatest development in the medulla oblongata and pons varolii.

In the cord, the most conspicuous change was the enlargement of the central canal, probably connected with degeneration of tissue, of which many evidences were found there and elsewhere. The nerve-cells of the brain and cord were generally perfect. Such parts of the sympathetic system as were examined—namely, the upper cervical and semilunar ganglia—were apparently natural. The only constant change found in the viscera was epithelial accumulation in the liver and kidneys.

Although the discovery of Bernard, that puncture of a certain part of the medulla oblongata renders the urine saccharine, directed attention to the state of this portion of the nervous system in persons who have died of diabetes, yet neither in the medulla oblongata nor elsewhere have such constant lesions been found as to place the disease in question upon a sure pathological basis. These observations of Dr. Dickinson are therefore of great value. It is scarcely necessary to add that he regards the lesions of the nervous system as antecedent to the change of secretion. This paper is illustrated with two lithographic plates.

Anosmia, or Cases Illustrating the Physiology and Pathology of the Sense of Smell. By WILLIAM OGLE, M.D., etc. etc.—This paper, like the preceding one, is not only well written, but also of great value. In two of the first three cases that Dr. Ogle reports, the anosmia occurred in consequence of a blow upon the occiput, and in the only other recorded case of loss of smell in which the exact part struck is mentioned, the seat of the injury is the same. The anosmia in these cases is attributed to rupture of the olfactory nerves as they pass from the bulb through the holes in the ethmoid bone. A blow which is not sufficiently violent to do serious mischief to the anterior brain generally, may still suffice to tear the olfactory nerves, owing to their very small size, and still more owing to their excessive softness.

In the three cases the patients complained that they had lost taste as well as smell; but if we limit taste, as physiologically we are bound to do, to those sensations other than tactile which are communicated by means of the gustatory and the glosso-pharyngeal nerves, and which do not include the perception of aroma or flavor, then in each the taste was unimpaired, for there was no difficulty in recognizing either acid, bitter, sweet, or saline. Pure taste is limited to the perception of these few qualities, and any additional perceptions, other than tactile, which food may give us, are derived, not from taste, but from the much wider sense of smell, and are due to irritation of the olfactory nerves. It is shown very conclusively by Dr. Ogle that in some cases, which stand in apparent contradiction to the view here taken of the nature of flavor, the sense of smell is not lost, but defects in the accessory mechanism prevent its being exercised in one of the usual ways, while they do not prevent its being exercised in another. Dr. Ogle also cites cases which show that aphasia and anosmia are frequently associated. The explanation of this association he finds in the fact that the external root of the olfactory bulb can be traced to the floor of the fissure of Sylvius. In this class of cases the loss of smell is only partial, being confined to one nostril.

Dr. Ogle is strongly inclined to believe that the acuteness of smell is dependent upon the presence of pigment in the mucous membrane of the olfactory region. He proves satisfactorily that animals with dark skins, even when of the same species, have the sense of smell in a much higher degree than those with light skins; and the same is true of the different races of men. In explanation of this singular fact he says that the pigment is there to absorb the odorous emanations. In conclusion, he gives some good reasons for believing that pigment plays a part even in the reception of auditory impressions.

Report of the Committee appointed by the Royal Medical and Chirurgical Society to investigate Bain's and Pacini's Methods of Restoring Suspended Animation. Members of the Committee, W. S. SAVORY, F.R.S. (*Chairman*), I. B. SANDERSON, F.R.S., HENRY POWER, THOMAS P. PICK (*Secretary*), G. GASCOYEN (*ex-officio*).—Experiments were made by the committee upon four dead human bodies,—the whole number of observations being eighty-three. In order to ascertain the relative merits of the two methods referred to the committee, not only to each other, but also to other methods already in use, they were contrasted with the plan proposed by Dr. Silvester,—the three modes being employed alternately on the same subjects. In some of the experiments Dr. Silvester, and in others Dr. Bain, was the operator. The analysis of the experiments will show the relative advantages of the different methods:

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	Number of experiments.	Average number of cubic inches inspired.	Average number of cubic inches expired.
Subject I.—			
Silvester,	9	22.0	21.9
Bain,	13	26.1	25.5
Pacini,	6	25.8	25.1
Subject II.—			
Silvester,	11	18.7	16.9
Bain,	10	23.5	23.3
Pacini,	9	7.4	8.5
Subject III.—			
Silvester,	6	19.4	12.5
Bain,	7	21.6	15.0
Subject IV.—			
Silvester,	6	35.0	13.3
Bain,	6	41.1	15.0

These results are decidedly in favor of Bain's method;* but the committee take occasion to say that "the method advocated and practised by Dr. Bain is but a modification of the plan usually known as Silvester's, and involves no new principle of action. It will be seen by reference to the table that in the amount of air introduced there is a greater difference when the same method is adopted with different bodies than there is between the two plans when practised upon the same body; this great difference being chiefly due to the size of the body, the amount of the mobility of the walls of the chest, and the rigidity of the muscles."

ON THE WASTING DISEASES OF CHILDREN. By EUSTACE SMITH, M.D., London. 8vo, pp. 196. Philadelphia, Henry C. Lea, 1871.

Diseases which are essentially chronic from their invasion, or become so during treatment, are seldom considered with sufficient minuteness in the ordinary text-books, being too often dismissed with the routine remark that tonics, a regulated diet, and, if possible, change of air, are indicated. It is, however, in the treatment of these diseases that the young practitioner feels the greatest need of advice. He can give the botanical description of every known variety of Peruvian bark, is familiar with the thousand-and-one preparations of the Materia Medica, has most probably armed himself with the well-tried formulæ of the schools, and yet at the outset of his career he finds himself called upon to treat some chronic infantile disorder, and is soon convinced, if imbued at all with modern skepticism as regards the action of drugs, that it is only by the most careful attention to the diet and hygienic condition of his patient that he can hope for ultimate success. If, at this juncture, this book of Dr. Smith's falls into his hands, he will indeed feel that he has "struck gold in the quartz," for the author, starting with the proposition that the amount of nourishment the child receives is not to be estimated by the quantity of food it takes, but by the amount assimilated, proceeds to the consideration of those abnormal conditions which result in malnutrition or "wasting." Simple atrophy from insufficient nourishment, chronic diarrhœa, and vomiting are first described; and this gives the writer an opportunity to develop most minutely and clearly his views on the hygienic diet of children in health and disease, maintaining that it is only by attention to these conditions that disease can be checked, the waste of tissue arrested, and the pale, emaciated, prematurely-old infant be transformed into the plump, rosy, hearty child, whose whole existence is but an expression of health. He urges, as do all modern authors, the necessity of the mother nursing her child; and though we would not weaken the effect of his argument by any word of ours, still it may be permitted, in a review, to dissent from the statement that "nursing prevents mammary abscess." On the contrary, abscess of the breast is exceedingly rare in women who are not nursing: for instance, we find that Winkel, in fifty cases of this disease, met with it only once in a woman who was not nursing her child; Edward Martin, of Berlin, in only eight cases out of one hundred and fifty under similar conditions; and we could greatly extend these statistics with the same result. Estimating so highly, then, the advantages which accrue to the child from receiving the nourishment designed for it by Nature, we are not surprised that the author recommends a return to the breast, or the adoption of a wet-nurse, in cases of atrophy, associated with diarrhœa, in infants who have either been recently weaned or who have been "brought up by hand." So strongly are the Continental authorities convinced of the necessity of this course, that they do not hesitate to say that without it treatment is in most cases futile. To quote only from Vogel (the best-known of the German authorities on the diseases of children), when speaking of this condition, he says, "There is only one remedy,—viz., the mother's breast: when the circumstances of the patient are such that a wet-nurse cannot be procured, the prognosis is *fere lethalis*." In speaking of the use of cod-liver oil in the after-treatment, the author lays great stress—and justly, too, as it seems to us—on the importance of inspecting the evacuations to see whether the amount given is digested, and insists upon the necessity of diminishing the dose until the medicine is no longer found in the discharges.

Here a few words of general criticism may not be amiss upon the manner in which the entire subject is dealt with by the author. It is evident that Dr. Smith is under the influence of the French school of teaching. Mere symptoms, as such, are given with the greatest profuseness, without a sufficiently careful analysis and reference of the individual phenomena to the various physical and pathological conditions which have produced them; and hence the pictures of disease are wanting in clearness, and the outlines are indistinct, passing the one into the other. We would not be understood as advocating lecture-room descriptions of disease, such as are seldom met with in practice, but rather as urging the *attempt* to unravel the complex group of symptoms, associating each with its corresponding pathological cause. It is, however, in this very point—viz., accuracy in the description of pathological processes—that the author chiefly fails; and, did space permit, we would gladly pass in review the pathology of rachitis and chronic diarrhœa as given by Dr. Smith. To prove, however, that this criticism is not wholly uncalled-for, let us take up more in detail the chapter on tuberculosis, which is perhaps one of the most interesting in the book. The author states that he has endeavored to utilize recent views on the subject of phthisis, but has limited himself to matters of practical importance. The labors of Virchow, Niemeyer, and Buhl in this field have, perhaps, more than any other scientific discussion in the last twenty years,—and we say this advisedly,—produced results of the deepest *practical* significance; and, if well understood, the deductions made from these theories are unanswerable. In stating these new views, however, there must be a precision of expression, a clearness in the use of terms, a freedom from ambiguity, which have never been demanded before. A single misapplication of the word "tubercular" will hopelessly confuse a whole argument. The author has, we think, failed to grasp the points which are essential to a clear development of this subject; and hence, while adopting the new theories as regards tuberculosis, he constantly misapplies terms, so that the whole chapter is wanting in clearness and force. For instance, the tenth chapter is headed "Tuberculosis of Glands," while the description which follows evidently has reference to the ordinary scrofulous degeneration of the glands of the neck, thorax, and abdomen. Undoubtedly these lymphatics may be the seat of tubercular degeneration; but here the process is entirely different, although the result may be and often is the same,—viz., cheesy degeneration. To speak more definitely, let us consider for one moment the scrofulous degeneration of these glands. The process is one of irritative hypertrophy, consisting of a multiplication of the pre-existing cells of the gland-structure, and is, in one word, a *hyperplastic* process. The product of this irritation may subsequently undergo cheesy degeneration, liquefy into a purulent fluid, or become calcified. When, on the other hand, we have to do with true tubercle, the process is *heteroplastic* in its nature, consisting of the production of cells precisely similar to those produced in scrofulous degeneration,—viz., the so-called "embryonic" or "indifferent" cells,—but owing their origin not to the prolifera-

* "The patient being laid on his back on a table, if convenient, the mouth and nostrils are to be wiped dry, the clothes, from the upper part of the body at least, having been removed. The operator stands at the head of the patient, placing the fingers of each hand in the axilla in their front aspect, with the thumbs on the clavicles, and pulls the shoulders horizontally towards him with a certain degree of power. Upon relaxing his pull, the shoulders and chest return to their original state."

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tion of the pre-existing lymphoid cells which fill up the alveoli of the gland, but to the rapid division of the *proliferating* connective-tissue cells which form the trabeculæ of the organ, resulting in the infiltration of this tissue with masses of lymphoid cells. In the first case there is simple hypertrophy; in the second there is the development of a neoplastic growth. This, too, may be converted into cheesy material, and hence it is only in the initial stage that we can distinguish these two processes. There are also other points on which Virchow lays great stress,—viz.: in scrofula there exists a certain "vulnerability" of the part,—that is, a susceptibility to the action of irritants which would normally fail to produce any effect; for example, a slight angina, a bronchial catarrh, an eczematous eruption of the scalp, is followed by an irritative swelling of the neighboring group of lymphatic glands; and this process once excited is characterized—and here is the second element in the formation of the scrofulous diathesis—by great "pertinacity" in its continuance, by an inability to return to its original normal condition, by a want, as it were, of recuperative power. The explanation of this peculiarity, Virchow is constrained to seek in a certain imperfect development of the structure of the organ, or congenital *weakness* of the part, this constituting the "predisposition." This predisposition does not, however, argue the necessary development of scrofula, if the irritant which calls it into action is wanting. If tried by these tests, it is plain that Dr. Smith's chapter on "Tubercularization of the Glands" has reference only to their scrofulous degeneration; and here we may remark that, curiously enough, in his description of the *tuberculosis* of glands, he has transferred the description of *scrofulosis* of the lymphatic glands as given by Virchow in *contradistinction* to tuberculosis. This error can only be explained by the fact that, apparently, the author has not had access to the original, the passage being quoted from some lectures given by Mr. Southey. As, however, true tubercle may, and undoubtedly does, originate from the conveyance into the system of these products of scrofulous degeneration, the importance of arresting the conditions which act as the irritant and produce these changes in the lymphatic glands cannot be overestimated. Eruptive diseases of the scalp, an attack of bronchitis or enteritis, acquire a new and most serious import when occurring in a child born with this diminished power of resistance to all such irritants, and demand, on the part of the practitioner intrusted with the care of such a patient, a full and just appreciation of their possible results. The day has passed by when we hesitate about "driving in too rapidly an eruption on the scalp;" unfortunately, as Hebra sadly writes, "up to this time we have never succeeded in curing a chronic disease of the skin suddenly, or even within a brief space of time." The day has not, however, as yet come when the profession at large appreciate the necessity of treating with the most conscientious care all bronchial or enteric disease, however slight, when occurring in a child with a hereditary predisposition to scrofula; and we wish that somewhat more stress had been laid upon this point by Dr. Smith, who dismisses it in a short paragraph, failing to realize, apparently, the great importance of the subject. In treating of pulmonary phthisis, we find again the same mingling of old and new,—the same misapplication of terms. The diagnosis of true tubercle in the lungs is one of extreme difficulty, and the sources of error are too numerous to be even mentioned in the brief limits of a book-review. Suffice it to say that, in our judgment, various conditions have been confounded by the author while attempting this task. For instance, the description given on page 185 as occurring in a rickety child is not that of disseminated true tubercle, but of peribronchitis, with the bronchial tubes filled with the retained secretions.

The chapter on Infantile Syphilis is an admirable résumé of the latest views on the subject, with the additional value of the concurrent testimony of the author as regards the beneficial results of the use of mercury in this disease, thus confirming the conclusions reached by Widerhofer and others in the Vienna hospitals, where the opportunity of solving therapeutical problems in connection with syphilis is unrivalled, owing to the absolute legal control which the hospital authorities exercise over the syphilitic patient and her offspring.

In conclusion, we can most conscientiously recommend the book to the profession, in the conviction that the careful study of the chapters on the hygienic and dietetic treatment of infantile diseases will be productive of the most valuable results.

We urge these considerations more positively because at the present time there is no question which is more anxiously studied, not only by professional men, but also by political economists and philanthropists, than that of the education and care of children in public institutions, and the means by which a more favorable result may be attained than has heretofore been possible.

GLEANINGS FROM OUR EXCHANGES.

NEUMANN'S THEORY OF THE DEVELOPMENT OF BLOOD-CORPUSCLES.*—The development of the blood is certainly one of the least understood physiological processes, and especially is this true of its cellular elements. The most diverse opinions have been held respecting the origin of the white cells, their transformation into the red, and the ultimate fate of the latter.

In the first place, the embryonal development of blood was regarded as the key to the mystery; and since in the embryo the development of red corpuscles takes place from the white or lymph cells, through the intermediate form of a colored nucleated cell, a similar process was assumed to take place in the adult body. Since, however, the intermediate form—a colored nucleated cell—could not be found in the blood of the adult organism, it was supposed by one party (Kölliker) either that these forms might exist in some part of the body not examined, or else that the absence of transitional forms was to be explained by the rapidity of the transformation. Another party gave up the theory of transformation of white into red corpuscles, and sought another mode of origin for the latter. Thus, according to Wharton Jones and Bennett, it was the nuclei of the lymph-cells which were transformed into the red corpuscles. According to H. Müller, the latter arose from a fusion of nucleus and cell in the smaller lymph-cells. Gerlach, Funke, and others believed in an endogenous formation of red corpuscles in larger cells, while Zimmermann had recourse to some entirely different elements of the blood itself. Since, however, none of the latter views could be satisfactorily established, the tendency has been to fall back upon the hypothesis of a formation of red corpuscles out of the white corpuscles of the blood itself. There is no greater unanimity of opinion respecting the ultimate fate of the red corpuscles, though, in spite of the doubts of Kölliker, it seems probable that there is a continual dying off and new production of these elements; and it has been thought that a greater or less power of resistance to the action of water is a sign of the age of particular corpuscles. The origin of the white corpuscles has been pretty generally assigned to the spleen and lymphatic glands, for which the abundance of those elements in the vessels leading from these glands is a weighty argument. It has, however, always been a matter of the greatest difficulty to determine in what part of the body the metamorphosis of the blood-corpuscles takes place. This process also has been referred to the spleen, and especially on the strength of two peculiar structures met with there,—(1) cells resembling the white blood-cells, but with a yellowish color; (2) cells said to contain red blood-corpuscles. The first form undoubtedly exists, as confirmed by Eales, in the rabbit's spleen, but loses in importance when compared with the more characteristic transitional forms observed by Neumann. The second form of cell at first excited great interest, but its occurrence is so very variable and uncertain that it is probably correct to regard it, with Virchow, as a more or less pathological structure.

It has also been supposed that the metamorphosis of blood-cells may take place in the liver, and this because the red corpuscles of the hepatic vein are thought to show, by their greater resistance to the action of water, that they are younger

*"Untersuchungen über die verschiedenen Theorien der Entwickelung der Blutkörperchen, besonders über die neueste, von Neumann." Inaugural Dissertation; von Charles W. Eales, M.B., Leipzig, 1870.

"Investigations on the Different Theories of the Development of the Blood-Corpuscles, and especially on the latest, that of Neumann." A Graduation-Thesis, by C. W. Eales. (Abstract by J. F. Payne, M.B.)—From the *Quarterly Journal of Microscopical Science*, January, 1871.

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than those of the portal vein, which are not only swollen up, but completely destroyed, by the addition of water. There are also many crenated and withered red corpuscles to be seen in the portal vein, but very few in the hepatic. These facts, if they prove anything, rather tend to show that the corpuscles in the portal vein are old and worn out, than that those in the hepatic vein are new; and the well-known solvent power of the biliary acids for the red corpuscles makes it probable that these may be destroyed in the liver and help in the formation of bile. But there is no proof that any new corpuscles are formed in the liver.

This enumeration is sufficient to show that, as regards the adult organism, no single point in the development of blood-corpuscles is yet satisfactorily established. Even that for which the most cogent arguments may be brought forward—namely, the origin of white blood-cells in the spleen—has recently met with the renewed opposition of Henle, who suggests, however, no other theory in its stead.

Professor Neumann, of Königsberg, deserves the credit not only of having, more or less, overthrown the theories hitherto proposed of the development of the blood-corpuscles, but also of having successfully inaugurated investigations on this point which lead in an entirely new direction. He has pointed out, as Henle did, that the organs which have been up till now considered are comparatively unimportant, and has most successfully filled up the gap thus produced in microscopical anatomy by bringing the blood-changes into relation with a structure to which such a function has never been ascribed. Kölliker had, many years ago, with a sort of divination, expressed the opinion that the origin of the red blood-corpuscles from the white in the adult organism would never be demonstrated until nucleated colored cells should be discovered. It was reserved for Neumann not only to discover the long-sought cell, but also to establish, on several grounds, its character as a transitional form.

The views of Neumann are published in the *Archiv der Heilkunde*, vol. x. (1869) p. 68 *et seq.*, under the title, "The Significance of the Marrow of Bones in the Formation of Blood." He there lays down two propositions:

1. There takes place in the vessels of the bone-marrow, favored by a considerable retardation of the blood-current, a transformation of abundantly-accumulated white cells into red.

2. A continuous passage of medullary cells into the vessels contributes to this accumulation of white cells in the blood-vessels of the marrow.

This whole theory, for which a considerable number of more or less reliable arguments can be urged, gains at once a large amount of probability from the discovery, first, of the colored nucleated cells, and, secondly, of a remarkable accumulation of lymph-cells in the marrow, in virtue of which the latter acquires an importance with regard to the formation of blood, not only equal to, but greater than, that formerly ascribed to the spleen. Other important arguments are, however, alleged. Neumann has found, besides those nucleated and colored cells which he regards as the true intermediate form between the white and the red corpuscles, other transitional forms which, on the one hand, form a passage from the white blood-cells to the red nucleated cells; on the other hand, from these to the red non-nucleated corpuscles.

Neumann meets the objection that these colored transitional cells may be merely lymph-corpuscles tinged with blood coloring-matter, by showing that their general character is quite different from that of lymph-cells, and, further, that they are limited to the osseous marrow. He accordingly compares them, as well as similar forms met with in the frog, to the nucleated red cells of the embryo.

The detailed description given by Neumann of the marrow refers especially to the marrow of the bones of rabbits, and he regards the existence of similar relations in the human body as a matter of probability rather than of certainty.

Eales also has found these minute structural characters of the marrow to hold good only in the case of rabbits, and has not succeeded in detecting them in the human body. This difference he regards as possibly explicable by the fact that the human structures examined were those of persons enfeebled by disease, and also that they were not examined till some hours after death. Besides that, the human marrow, even that of children, is very different in appearance, even to the naked eye, from that of young rabbits, which may often be separated completely from the surrounding bone, in the form of a red cylinder. The *a priori* probability that similar relations exist in the human marrow will, very possibly, be confirmed by researches conducted in some different method.

Eales also insists upon the fact admitted by Neumann, that the yellow fatty marrow which fills all the long bones in adults plays, at best, a very subordinate part in blood-formation; and that the observations must be understood to apply only to the red vascular marrow which is found in all bones in young animals, but in adults in the spongy bones only.

This structure is minutely described by Neumann, whose account is confirmed in the main by Eales. It consists of a remarkably developed capillary network, and of a special tissue, called by Neumann the medullary tissue, contained in the meshes of this network. The capillaries have this peculiarity, that their calibre is much greater than—on the average, four times as great as—that of the small arterial branches immediately supplying them, and this sudden enlargement of the blood-channel must cause a considerable diminution in the velocity of the blood. The capillary network is also very close, its meshes being only about half again as large, or less than twice as large, as the diameter of the capillaries. Within these vessels, especially in the wider portions, is seen a great accumulation of white cells, as well as "transitional forms" in variable proportion, and it is these which especially mark out the locality as the seat of blood metamorphosis. The tissue contained in the meshes of the vascular network consists of a stroma of delicate stellate cells, anastomosing by means of fine prolongations, and thus forming a reticulation within which are contained, in the red marrow, a large number of lymphoid cells; but these do not occur in the yellow marrow. To this tissue Neumann gives the name of *medullary tissue;* and to the red form, *lymphoid medullary tissue;* it bears most resemblance to the cytogenous connective tissue of Kölliker, or adenoid tissue of His. The yellow matter, being without lymphoid cells, and having its anastomosing cells filled with fat, resembles ordinary adipose tissue. Since it is precisely in the red marrow, with its numerous lymphoid cells, that an accumulation of white or lymphoid cells is seen within the blood-vessels, the question at once arises, What is the connection between these facts? Are the lymphoid cells in the blood derived from those in the medullary tissue, or *vice versa?* Neumann supposes that the lymphoidal cells of the blood are formed in the medullary tissue, and find their way into the vessels by a process of immigration similar to, but the converse of, that of emigration observed by Cohnheim; though, of course, not in this case susceptible of direct observation. The difference is, however, very considerable between a cell finding its way out of a vessel in the direction of the blood-pressure, and into a vessel against the blood-pressure. In order to make it probable that the medullary cells do find their way into the vessels, it would be important to show that they exhibit amœboid movements. Neumann has observed that a small number only of the lymphoid cells pressed out of the medulla in a rapid investigation are without these movements, and concludes that it would be impossible to regard this small number as the only medullary cells; so that some of those showing amœboid movements must be medullary.

More important support is given to the theory by various facts which point to a multiplication of medullary cells, since these, as they must go somewhere, Neumann concludes must find their way into the vessels. He also draws attention to the variations in size of the medullary cells, laying down the proposition that great differences in the size of similar elements in a tissue must depend upon processes of growth going on in them. Moreover, he draws attention to the myeloid cells, or "*myeloplaxes*," found in the marrow of bones, which cells, according to Kölliker, arise from a proliferative increase of the small medullary cells, and finally divide again into a large number of small cells. If, then, according to Neumann, such a multiplication of small cells does really take place as these facts point to, there is no other exit for them than into the vessels; the nutritive changes in so stable a substance as bone being far too small to need so copious a supply of organizable material. The hypothesis of an *emigration* of white cells from the capillaries into the medullary tissue, and a con-

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sequent accumulation of them here, is rejected by Neumann on the ground that a tissue, like the medulla, enclosed in a hard shell of bone, is especially unfavorable for the emigration of cells, and that it is difficult to see what would become of the emigrated white cells, their return to the vessels being improbable, and their exit through the very scanty or almost deficient lymphatics of bone being equally so.

An unprejudiced consideration of all these circumstances must lead to the conclusion, that though the theory of Neumann is hardly susceptible of direct proof, it has, at all events, a great deal to say for itself; and that the marrow deserves, if any tissue of the body does, special notice with respect to the question of the transformation of blood-cells.

Eales' own researches have been especially directed to the ribs, but he has obtained similar results from the apophyses of the long bones, the sternum, and the diploë of the skull.

The method of investigation, which is substantially that of Neumann, is as follows: A sawn-off piece of bone is gently pressed between a vice or pair of pincers till a thick reddish fluid oozes out from the cut surface. This is removed with a pipette and examined under the microscope without any addition, and is most advantageously covered with small fragments of covering-glass. An enormous abundance of lymphoid cells, of the most various size, at once strikes the eye; true red corpuscles are present, but in very small number. The peculiar cell-forms designated as transitional, which are here so important, have been repeatedly observed to occur in varieties which may be arranged in the series described below; a series forming a perfect chain of connection without any important break from the white to the red cells, or at least hardly admitting of any other equally satisfactory interpretation. Beginning with the white or lymph cell, the series is as follows:

1. Colorless granular cells without a visible nucleus (ordinary lymph-corpuscles).
2. Smaller cells of the same kind, without more irregular outline, and without a visible nucleus.
3. Cells almost of the same size, with a large granulated nucleus, and in its neighborhood a few scattered granules; and also with an annular or crescentic slightly yellowish border.
4. Cells of the same size, with a similar border, a somewhat smaller nucleus; no granules.
5. Cells of about the same size, with a sharp outline, a somewhat more distinct yellow color, and a still smaller granulated nucleus in the middle (half-way or middle stage).
6. The same, with a more or less homogeneous, sometimes slightly concave, nucleus.
7. The same, with scattered irregular granules (remains of the nucleus).
8. More decidedly yellow; somewhat smaller; without nucleus.
9. Yet smaller; more intensely colored, without nucleus (ordinary red blood-corpuscles).

It will be seen from this short description of the different cell-forms, that they constitute so unbroken a series that one might be tempted on this basis alone to refer the metamorphosis of blood-elements, without hesitation, to the marrow: if, however, there were no confirmatory grounds, the author would not venture to draw this conclusion, since the cells in question might be susceptible of another interpretation.

The process of transformation appears to be, judging from the series of forms above described, as follows: the granulations in the lymph-corpuscles diminish from the periphery, next they lose near the centre some scattered granulations, while the remaining hyaline substance begins to be colored yellow so soon as the granulations have quite disappeared, though with little general diminution in the size of the cell; the nucleus, previously granular, becomes small and homogeneous,—while the whole cell is still but little diminished in size,—and it is not till the nucleus has first broken up and then quite disappeared, that the size of the cell is materially diminished.

Neumann, who refers to this process only in the following words, "The protoplasm becoming colored and at the same time homogeneous,—after that disappearance of the nucleus,"—does not seem to understand the process of transformation quite in the way here sketched out, and draws especial attention to cells which are more or less homogeneous in the centre, but retain their granular character at the periphery. If, however, these represented transitional forms on their way to become red corpuscles, there should be also forms with a yellow coloration in the centre, which is not the case. Hence these forms described by Neumann may perhaps not be transitional forms at all, but rather modifications of the ordinary lymph-cells which are on their way to perish altogether. The probability that some do thus perish before conversion into red corpuscles has already been pointed out by Virchow.

With respect to the frequency of these transitional forms, they may be found in larger or smaller numbers in the fluid from all *red* marrow; at least the characteristic nucleated colored cells have never been found entirely wanting. Examinations have been made of the bodies of new-born children and adults of every age, including, in one case, a woman of ninety-eight years of age. The assertion of Neumann, that the number of transitional forms diminishes with increased age, was found to be confirmed in the extreme cases; but for intermediate cases, or generally for any universal conclusions, the number of cases (twenty or thirty) seemed insufficient. Four special cases seemed worth more detailed notice:

1. In a case of Addison's disease, the medullary fluid contained, properly speaking, *nothing but* white cells, and the transitional forms were fewer and less distinct than in any of the other cases.
2. In a woman who died of puerperal hemorrhage, transitional forms in all stages of development were extremely numerous and well defined.
3. In a woman who had committed suicide (poisoning with hydrochloric acid), transitional forms were more distinct and somewhat more numerous than in the case of individuals dying of a long or short illness.
4. In phthisical patients, about as many transitional forms as in the second case. The constant occurrence of colored cells with two nuclei was very noticeable; in one case there was a cell with three nuclei.

It should be mentioned that almost always more transitional forms were found in rabbits than in the human subject.

Cases of leukæmia were also investigated. In a case of Neumann's, he had previously observed that the vascular network, generally so richly developed in the medulla, was absent. The medullary cells were not only extremely numerous, but showed very remarkable differences in size. The few vessels which remained contained almost entirely red corpuscles. These very interesting results agree perfectly with the view that the abundance of white cells in the blood, which characterizes this disease, may be due to a diminished conversion of white cells into red, as well as to an increased production of the former. It is, however, clear, from the occasional occurrence of colored nucleated cells in the blood of leukæmic persons, that the blood metamorphosis cannot be entirely suspended, the probable explanation being that these cells have left the marrow before their complete transformation.

Eales had the opportunity of examining a femur and a rib of a leukæmic person, but not till they had been long preserved in spirit. In these specimens he found the medullary cells well developed and numerous, the vessels containing what looked like white and red corpuscles. No transitional forms were seen, but the weight of these observations was diminished by the fact that they were not made, as Neumann's were, on fresh specimens.

CARBOLIC ACID IN OTORRHŒA.—Dr. J. P. Pennefather (*Lancet*, December 3, 1870, p. 804) recommends the following injection in this affection: Carbolic acid, one drachm; glycerin, one ounce; distilled water, five ounces. Used thrice daily, it never irritates, and rapidly cures. The only complaint is the unpleasant taste in the mouth when the membrane is perforated.

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MISCELLANY.

ANNUAL MEETING OF THE ALUMNI ASSOCIATIONS.—During the past year, both the University of Pennsylvania and Jefferson Medical College organized an association of their respective alumni. We are informed that both societies have given gratifying proof of the real want which existed for such associations, by the rapid increase in their numbers, and the great interest manifested among the profession in their operations. The annual meeting of these bodies will be held during Commencement week.

The Alumni Association of the University will celebrate their anniversary by a banquet at the hall of the Department of Arts, at 6 o'clock on the evening of Monday, March 13; and the annual meeting of the society will take place at 5 P.M. on Tuesday, March 14, in the Medical Department.

The annual meeting of the Alumni Association of the Jefferson Medical College will be held at the College on Saturday, March 11, at 12 o'clock. The address of the President, Prof. Samuel D. Gross, will be delivered at the College in the evening, at 7 o'clock precisely; after which the Alumni dinner will be served at Augustin's, 1105 Walnut Street.

CLINICAL INSTRUCTION IN INSANITY.—Dr. Sibbald, in a late number of the *Journal of Mental Science*, advocates this addition to the ordinary courses of medical teaching. Experience has thoroughly proved that the giving of such lectures, with due precaution, has no bad effect upon the patients whose cases are used for illustration; while there are few practitioners who have not felt the want of just the knowledge which would be thus imparted. Cases of insanity can seldom be long treated in private practice; but their early recognition, and the discrimination of their various forms, may be of the utmost consequence to all the parties interested.

THE CONTAGIOUS DISEASES ACTS.—There is a singular confusion of opinions in regard to the working of this plan for the control of prostitution and its physical effects. We find in the *British Medical Journal* of January 28 that in the inquiry by a Parliamentary committee as to the working of the acts at Plymouth, "the evidence attempting to show abuse, and the apprehension of modest women, has completely broken down, while the most conclusive proofs have been received of the admirable sanitary effects of the acts." Such statements contrast strangely with the furious outcry against the acts which has arisen in some quarters. Perhaps the truth of the matter is not easy to ascertain.

NATIONAL UNIVERSITY.—The *National Medical Journal*, says, "It is contemplated to establish in Washington City a national university, embracing a literary college, besides departments of law, physic, and polytechnics, in which the highest order of talent will be employed in the various departments, and the most elevated systems of education adopted; instruction to be *free*, and accessible to both sexes." There would, we fear, be found many grave difficulties in the way of the thorough carrying out of any scheme of this kind; not the least of which would be the influence of politics, and the varying degree of favor which would shine upon it with changing administrations.

MUNIFICENT.—Earl Derby, it is stated, has made donations to the amount of £20,000 towards the establishment of a hospital at Liverpool, to be called the Stanley Hospital. We believe the gift was mainly in the form of ground, to be occupied by the institution.

SENSIBLE.—The *Boston Medical and Surgical Journal* states that "the committee of the Massachusetts Legislature, to whom was referred the proposal for a bill providing that physicians' prescriptions and apothecaries' labels should be written in the English language," have reported that "it was inexpedient to legislate in the matter." Much inconvenience and no advantage would result from the enforcement of any such law. The desired end would be far more surely attained by holding to a strict accountability those who are proved to have caused, by their carelessness or incompetence in putting up prescriptions, the death or dangerous illness of any one.

ABUSE OF INSANE HOSPITALS.—It would seem from the evidence of state papers that the late French Empire had, occasionally at least, used the *maisons de santé* for the storage of troublesome political opponents. A more convenient resource for an unscrupulous government, with shrewd and dexterous agents, could scarcely be devised.

MORTALITY OF PHILADELPHIA.—The following statements are derived from the Health Office returns:

Interments for the week ending February 11, 1871	280
Adults,	144
Minors,	136

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 47)	96
Diseases of Brain and Nervous System	37
Debility, 25; Marasmus, 10; Old Age, 11	46
Diseases of Abdominal Organs	20
Diseases of Organs of Circulation	14
Zymotic Diseases	17
Stillborn	16
Casualties	7
Cancer	5
Intemperance	2
Unclassified, 18; Unknown, 2	20
	280

Interments for the week ending February 18, 1871	274
Adults,	139
Minors,	135

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 43)	98
Diseases of Brain and Nervous System	43
Debility, 14; Marasmus, 6; Old Age, 13	33
Zymotic Diseases	23
Diseases of Abdominal Organs	17
Diseases of Organs of Circulation	17
Stillborn	17
Casualties	8
Cancer	3
Intemperance	2
Unclassified, 10; Unknown, 3	13
	274

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 4, 1871, TO FEBRUARY 17, 1871, INCLUSIVE.

SLOAN, WM. J., SURGEON.—At Louisville, Ky., Headquarters Department of the South, moved from Atlanta, Ga., to Louisville, Ky.

MILHAU, J. J., SURGEON.—At Louisville, Ky., Attending-Surgeon, Headquarters Department of the South, moved from Atlanta, Ga., to Louisville, Ky.

BILL, J. H., SURGEON.—By S. O. 58, War Department, A. G. O., February 9, 1871, so much of S. O. 385, A. G. O., December 31, 1870, as discharges this officer, is hereby revoked.

MICHLER, W. H. H., ASSISTANT-SURGEON.—By S. O. 22, C.S., Headquarters Department of the Platte, assigned to temporary duty at Omaha Barracks, Nebraska.

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WEDNESDAY, MARCH 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE ADVANTAGES OF SUSPENDING THE LIMB IN THE TREATMENT OF FRACTURES OF THE LEG.

Delivered at the Pennsylvania Hospital, February 15, 1871.

BY ADDINELL HEWSON, M.D.,

One of the Attending Surgeons to the Hospital.

GENTLEMEN:—I wish to occupy your time here this morning in discussing the advantages of hanging the limb up from off the bed, in the treatment of fractures of the leg-bones. In referring to the effects of such a method as advantages, I must necessarily draw an invidious comparison between this method of suspension of the limb, and that of keeping it lying on the bed, as we do with the fracture-box originally used in this institution, and which is known everywhere as the Fracture-box of the Pennsylvania Hospital. In doing this, I do not wish to detract from the merits of this box or ignore its usefulness: on the contrary, what I shall say must be considered as against the *method*, and not against the *means* which it (the fracture-box) possesses of carrying out that method. The fracture-box is, indeed, efficient in affording some lateral support to the fragments, and, even more so than any other appliance based on the same method, in resisting the tendencies to retraction of the heel which are incident, as I shall presently show you, to the method itself.

We always have, as the great obstacle to effecting and maintaining the reduction of the fragments in a broken leg, where there is obliquity and facility for displacement, the action of the muscles attached either directly or indirectly to the leg-bones, which includes, we may say, that of all the great muscles of the lower extremity; for they, with the limb stretched and flat on the bed, as we have it in the fracture-box, are more universally in a state of tension than when the limb is in any other position. For in this prone posture we have the powerful muscles on the front of the thigh, inserted by the ligamentum patellæ in the tubercle of the tibia, and which act as extensors of the leg; then there are the muscles of the hamstrings on the back of the thigh, which are flexors of the leg; and, finally, there are the muscles on the front and back of the leg itself, all far more on the stretch than they are when the limb is in the position which I wish to advocate before you,—namely, with the thigh somewhat flexed on the pelvis, the leg similarly flexed on the thigh, and the foot flexed on the leg. In the latter position we actually overcome the powerful resistance which the muscles I have referred to are capable of making to our efforts to reduce and maintain in place the broken ends of the bones. Thus, when I flex the patient's thigh up towards his abdomen, I relax very effectually his quadriceps cruris, which, you know, consists of the rectus, the vasti, and the cruræus, and is attached by the ligamentum patellæ to the tibia, the chief bone of the leg. This flexing of the thigh on the pelvis throws, however, the muscles on the back of the thigh—the biceps, the semi-membranosus, and the semi-tendinosus—into a state of great tension, when the leg is extended; hence the necessity of next flexing the leg on the thigh. This second step not only relaxes the flexors of the leg, just mentioned, but also produces that effect on the gastrocnemius, which, with the soleus, forms the greater part of the calf of the leg; and the rigidity of these two muscles, you can readily see, must have a great tendency to draw the heel back and so produce deformity in an antero-posterior direction. Finally, the flexing of the foot on the leg relaxes the tibialis anticus, the extensors, and the peronei muscles; all of which may not unfrequently contribute force towards keeping the fragments out of place.

Now, this picture may seem to you overdrawn. You may, indeed, be disposed to consider that I have very much exaggerated the influence of muscular action in the production of the deformity which occurs in fractured legs, and that I have even attributed influence to some muscles which really do not possess any. But I do not claim that deformity must always be present in a broken leg, and admit that these muscles do not always *act* in the manner I have intimated, for the direction of the obliquity can also exert an influence even in preventing such action of muscles; but all this is no proof that they cannot, and I shall show you, by cases which I am going to bring before you, that they actually can, and frequently do, produce the deformities I have referred to. Before I exhibit these cases to you, I must, however, refer to another serious objection to the treatment of fractures of the leg in the prone position, and which bears with special force on the fracture-box. I allude now to the natural tendency of the lower extremity to rotate outward when suffered by the patient to rest quietly on the bed when he is lying flat on his back. This, you will remember, I referred to in a former lecture, and then pointed out to you that it was the consequence of the position and conformation of the hip-joint, the greater power of the external rotators of the thigh, and the preponderance of weight on the outer side of the thigh, from the greater mass of tissues there. Here I show you, as I did then, the pelvis and the bones of the left lower extremity, articulated artificially after the manner of their relations in the natural state; and you can see, when I lay these parts of the skeleton on the bed, that the elevation of the cotyloid cavity above the plane which the knee and heel have in the recumbent posture, and the ball-and-socket character of the joint, must all necessarily tend to the falling of the greater trochanter, which will cause rotation outward of the whole limb. This rotation is further favored by the action of the great mass of muscles forming the buttock, which, you know, contribute to the rotation outward of the hip-joint.

Furthermore, any apparatus attached to a broken leg, with that leg lying on the bed, must of necessity fix the portion to which it is specially attached, to the extent that any movement which the patient may attempt to make of his body will disturb the relations in which you have placed the fragments. Thus, for instance, moving to use the bedpan, and turning in sleep to one side or the other,—movements which cannot be avoided,—then there is propping one's self on the elbow, which you often catch your patients doing,—or raising and maintaining the head and shoulders higher than they were when you made the dressing, as patients will constantly do,—must all, as you can readily perceive, cause some displacement and overriding of the fragments. The last-mentioned act is one which I am confident is a most fertile source of mischief in the prone mode of treatment. All you have to do, to satisfy yourself of the possibility of this, is to examine any person who has propped himself up in bed by three or more pillows, and you will find that he has evidently slid down towards the foot of the bed from where he was before such pillows were inserted under his head. Now, if such a person has a broken leg in a fracture-box, it is evident that the box by its own weight will offer some resistance to this sliding towards the lower end of the bed. But there is the disposition in the body to so slide, and hence there must be, as a consequence of the head and shoulders being so raised, some overriding of the fragments produced.

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I will now show you some cases illustrating these various points; and, after we have discussed these, I will demonstrate the manner in which suspension overcomes these difficulties and objections.

Case I.—And first of all I have a man who sustained a fracture of the leg, high up at the junction of the upper and middle thirds, when he was quite a child. He is now forty-eight years old. He says, in answer to my interrogatories, that he does not know how it was treated,—is confident it was not suspended. Of this there could not be much question; for the accident occurred long before such a method was in vogue. There is not much trace of the injury now, but, if you will observe, as I place my index-finger on the patella so as to indicate a line perpendicular to its surface, that such a line does not correspond to the long axis of the foot, that the patella looks somewhat outward, whilst the toes are presenting directly upward as he lies on the bed. Passing the fingers of one hand downward from the knee along the spine of the tibia, and those of the other hand upward from the ankle along the same edge of bone, I can, as you see, detect a positive deviation of the spine at the point I have before indicated; and this deviation is such as will account for the difference in the direction of the patella and foot. Now, when I make this man walk across the floor, you see that he turns this foot in more than he does the other one. He also cannot, by any effort, turn it outward as far as he can the other, but can turn it much farther inward.

This patient has been in the house since the 26th of December, for a fracture of the ankle of this same leg, through both malleoli; and, although no eversion has resulted at this point, you can see that there is a deformity at the ankle, by comparing it with its fellow-ankle, and this deformity is the result of the action of muscles of whose ability to exert any such influence I have no doubt you were incredulous; I mean the extensor longus and the peronei,—specially, in this instance, the extensor longus and peroneus tertius: these have rotated the foot on its axis, and, jamming the astragalus obliquely upward and inward, have made the inner malleolus project, and be, as you see, more prominent than that of the other limb. The deformity, it is true, is not great, but it is there, and the distortion of the foot is like, but less in degree than, that which is so characteristic of Potts' Fracture of the Ankle. For this accident the patient has been treated in the fracture-box steadily from the time of his admission, and may now, after the lapse of nearly eight weeks, be considered as cured; and the cure is not a bad one for the method pursued.

Case II.—Here is another case which has been treated in the fracture-box; and, as he was admitted some six weeks ago, the result may be considered as well determined. The fracture was at the junction of the lower and middle thirds, an oblique one from above downward and from without inward, in such a manner that no rotation could take place; but see how his shin is bowed forward, or, if you prefer it, his heel is carried backward. Now, this, you must admit, has evidently been the result of the action of the muscles of the quadriceps on the upper fragment, and of the muscles of the tendo Achillis on the lower fragment. Some of you, remembering the very great power of the latter set of muscles, may be inclined to attribute the deformity altogether to them; but that would not be correct, for by a close examination you can see that the tibia has not been broken in such a direction as to give the lower fragment any purchase on the upper one, which would be necessary in order for them to produce the deformity here present. I shall, before I close my lecture, show you a recent case precisely like this, and can then make this point perfectly clear to you.

Case III.—But I have yet another case which has been treated in the fracture-box. Here it is; and in it let me first direct your attention to what the patient has under his head and shoulders. See: here are one, two, three pillows, two books, and some clothing. Now, this, I assure you, has not been gotten up for the purpose of illustration of my previous remarks. Indeed, I can appeal to my patient, assistant, and nurses as to the fact that no one had any intimation of my intention to comment on this matter, or my desire to have a case brought in here in the condition in which I find this one. I selected this case this morning specially on account of the deformity which it presents. I did, however, notice at the time, without making any remarks in regard to the fact, that he was very much bolstered up in bed, and thought it would be a good demonstration of the mischief which follows such a practice. On inquiry, I am now told that this patient has been constantly in the practice of so propping himself up in bed; and you can see for yourself the mischief which has ensued. His body has been thus constantly on an inclined plane of such an angle as to dispose it to slide down toward the fracture-box, and you can see the effect of this. There is, as I show you, positive shortening of over half an inch. But this is not all. Look at the relation of the patella to the foot. The latter has been kept vertical, by being attached to the foot-piece of the box; but the former has, through the absence of all resistance, either from the direction of the fracture, or the support given by the box, been turned as completely out as it is possible for the forces which I have before mentioned to do. There is a deviation of not less than twenty-five or thirty degrees between a line perpendicular to the surface of the patella and one drawn through the axis of the foot; and in this case you can see that there have been earnest endeavors to prevent this rotation, for here is an ulcer, nearly two inches long, over the projecting point of the upper fragment, which I have been told is not from injury inflicted on the integument at the time of the accident, but is a secondary affair, from the pressure used through the pillow in the box, which has been resorted to for the purpose of overcoming the displacement of this fragment which had constantly existed in the case. The ulcer certainly shows that the efforts for this purpose were not of an insignificant character.

After this exposition of the defects of the method of treating such fractures in the prone position, I think you will be ready to learn and appreciate a method which is, in my opinion, free from such defects. To exhibit in the strongest light possible all the advantages of putting the limb in a flexed posture, and maintaining it in such a posture away from the bed, I now bring before you another case.

Case IV.—This is a man who was admitted night before last, with a somewhat transverse fracture in the lower third of the leg, and, in consequence of all our suspending apparatus being in use on other patients, his limb was placed in the fracture-box, after the fragments had been well adjusted. The next morning they were, however, out again; and so this morning, on my visit to the ward. I then readjusted them, as my assistant had done the morning previous; but those of you who are near and can see into the box can recognize the same deformity which was apparent in the second case I had before you to-day,—namely, the bowing forward of the shin; and when I let down the sides of the box the whole class can perceive the condition of things, and that the usual precaution has been taken, by putting some wadding under the heel, to make the lower fragment fall back, and yet you can see the deformity has place. You can all see how tense, swollen, and painful the limb is; you notice how he winces when I touch him, even up near the knee; and here, close to the seat of fracture, there are three large blebs, each containing nearly a drachm of bloody serum. These all indicate considerable injury to the soft parts, and the expression of the patient's face is one of fear and suffering. He has been in constant pain since he sustained the injury. Now, as I take the leg out of the box, by raising it *gently* with one hand just below the knee, and with the other just above the ankle, a violent spasm is provoked in all the muscles of the limb, including even those of the thigh; the deformity is greatly increased, his knee is rigidly held in its extended position, and by his cries you are all made aware of the suffering he is enduring. Holding it up in this position, just off the pillow, I direct my assistant, Dr. Gerhard, to place his hands under the thigh and gradually to elevate that portion of the limb until it is well flexed on the abdomen, and, as this is being done, I, with the same care and gentleness, flex the leg on the knee; and the moment we get the two portions of the limb midway between extension and flexion, you see, he is relieved; his anxious expression, even, is gone. The fragments have slipped into their proper places, and the deformity has disappeared. I can

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now remove my hand, which has been supporting the leg just below the knee, and with it I can finger and even press the limb all around in its upper portions without eliciting any evidences of suffering from such manipulations. You can even see, as I do this, that the muscles are not so tense there as they were when the limb was lying in the box. Here is the position, then, in which we ought to maintain this limb; it is the one which we have had to resort to every time we have succeeded in reducing the fragments in this case, and you can see how well and how comfortably it meets all the indications. For this purpose I shall now apply one of Professor N. R. Smith's wire anterior splints, and so hang the limb to this gallows frame, which we in this hospital have, for convenience of moving the bedstead, made to set on it. In private practice, you may put a staple in the ceiling over your patient's bed, to hang the frame from, and in place of this wire splint you may use one of wood. Some surgeons use the splint extending only to the knee; but I am very decided in my preference for one like that we use for fractured thighs, for with it we can fix the knee,—an important point, as you can understand from what I have said concerning the power of the thigh-muscles to effect distortion. This splint I bend in its middle over the back of a chair to correspond to the bend of my patient's knee: it is already bent some eight inches from either end, at nearly right angles. The lower end is intended to be used for fixing the foot, and the upper is to extend up on the abdomen, where it can be fastened by a bandage around the waist, to steady it, as we have to do in fractures of the hip-joint or thigh. This part of the splint we have no use for in the present instance. Having bent the splint as I want it, I will now have it covered by a roller bandage, taking care to adjust the cross-wires by which it is to be suspended at the proper points, namely, one just below the bend for the knee, and the other just above that for the ankle. This done, I place the splint on the front of the limb, and then take, whilst my assistants are supporting the limb, some strips of a roller bandage long enough to go around the limb and splint. One of these I put around, just below the hip-joint, and pin it where its two ends cross each other in front; another I adjust in the same way above the knee, one below it, one across the calf of the leg, and one just above the ankle. I then fasten a piece of strong cord to the two suspending bars, so as to make a loop from one to the other of those points; through this I pass the cord hanging from the gallows, and tie it firmly, and then, shortening the latter so as to make all tense, I direct my assistants to remove their hands, and you see the limb is suspended in the flexed position. I must now examine the bands by which the limb is suspended, to ascertain if they are bearing smoothly on it and giving the proper support at each place. The heel one, you see, needs adjusting; it is too high up on the ankle to give all the support required by the foot, and I find I must put it directly under the heel; and to secure it there its ends must be carried up the whole length of the foot-portion of the splint, and pinned in that position. This done, you can notice that there is no deformity at the seat of fracture, and that the foot has settled into an oblique position corresponding to the direction of the line perpendicular to the patella, before spoken of. I was very careful, as you may have noticed, in not forcing the foot up into the vertical position which the foot-piece of the splint has; for had I done so I should have occasioned the rotation which I found fault with in the fracture-box treatment. To secure everything as we want, I next complete the dressing, by applying a roller, through circular and reverse turns, smoothly all along the limb and splint from the toes to the hip. This done, through the folds of the roller I can pass my fingers wherever I please, to determine the state of adjustment of the fragments, and thus avoid the necessity of disturbing the dressing as long as it is firmly applied. I have some patients now in the wards, with this splint on, who have not had the bandages removed for over a week.

Finally, I have to call your attention to the comforts which are to be experienced from this mode of treatment. You can see, as I direct my patient, that he can sit up, turn partly on his side, can move up or down in bed, can sit on a vessel, or have as many pillows under his head as he pleases, without in the least disturbing the fracture. These advantages you will derive the utmost satisfaction from in private practice, where you cannot usually secure a fracture-bed, or the observance of the conditions essential to success in the prone method.

ORIGINAL COMMUNICATIONS.

TOBACCO.

BY DR. J. C. MORRIS.

Read before the Philadelphia County Medical Society.

THERE are certain topics which, when set agoing among energetic men, seem like veritable apples of discord. Such are slavery, drinking, prostitution, and, to some extent, my subject this evening. But it is surely the part of thinking men quietly and dispassionately—I might say *impersonally*, as far as possible—to weigh such matters in their minds, come to the best conclusion upon them, and then act fearlessly and without favor either to themselves or to others. Such is pre-eminently the duty of the medical thinker, who should always act as the sentinel of society. It is with the view of aiding this process of thought that I have thrown roughly together such facts as I have been able to gather, and such reflections as they have suggested to me.

The use of tobacco is largely on the increase in the civilized world, and probably a short supply of it would affect the immediate comfort of a larger number than would the withdrawal of the supply of tea from China; for while other beverages can be made to replace the latter, nothing can console the smoker deprived of his pipe.

Some years ago (1862), a very active discussion took place in the columns of the *London Lancet*, in which all the virulence of the old "Counterblast against Tobacco" was aroused on both sides. But mere surmises and hastily-written newspaper articles were hardly the right methods of attack or defence; and now that the study of articles of food and medicine has progressed so much under the leadership of such men as Harley, Anstie, and other physiologists who are laboring to clear away the fogs of error, proscription, and prejudice, and give us a clear insight into the modus operandi of many of the articles which we so empirically pour down the public throat, the time seems opportune for the examination of the real merits and demerits of this article, I may almost say, of universal use. That it must have *some* merits, seems to me clear from this very fact. Unknown until the commencement of the sixteenth century, its use is now common from "Occident to farthest Ind;" and there must be some general human want which it meets and gratifies, to enable it thus to triumph over the sufferings of initiation, the prejudices of race and religion, armed with all the terrors of law, which have been fulminated vainly against it, until now the most highly-civilized governments in the world see to it carefully that their subjects are supplied with tobacco, and derive no inconsiderable portion of their revenue from it. During our rebellion, France could look elsewhere or wait quietly for cotton until she could get it; but not so with tobacco,—that she *must* secure a supply of.

Such a study of the subject may be found in a work recently published by Dr. A. Blatin, "Sur la Nicotine et le Tabac,"—a work which I cannot commend too highly for its moderation in tone, and clear philosophical arrangement of facts. That some of these are striking enough will be evident from the following table. The author is speaking of the influence of the excessive use of tobacco as a cause of insanity, and quotes as follows from a memoir by Prof. Jolly, read before the Academy of Medicine, February 21, 1865:

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"What is no longer doubtful is the part taken by tobacco in the progressive development of mental maladies, and more especially in the etiology of that form of alienation so vaguely denominated general or progressive paralysis, and which for a certain number of years has increased so as to encumber in every direction the 'maisons de santé' and lunatic-asylums. MM. Guislain and Hagon were the first to point out the double influence of tobacco and spirituous liquors on the almost unheard-of development of this disease, and the following statistics seem to justify the opinion of the Belgian physicians:

"From 1818 to 1830, the production of tobacco being 28,000,000 kilos, there were 8000 insane.

In 1838, the same product being				30,000,000	kilos,	there were	10,000	insane.
" 1842,	"	"	"	80,000,000	"	"	15,000	"
" 1852,	"	"	"	120,000,000	"	"	22,000	"
" 1862,	"	"	"	180,000,000	"	"	44,000	"

Such a statement is startling enough in itself; but when we come to add to it the numerous cases of paraplegia, chronic myelitis, and other neuroses which these gentlemen trace to the abuse of tobacco, making the whole number of victims not less than 100,000 in France alone in the year 1862, we may well ask ourselves, Can all this be true? Is there a form of paralysis as well deserving the name of nicotic, as that from lead deserves to be recognized as saturnine?

In the first place, let us glance at the history of the introduction of tobacco. From the classic Greek and Roman authors we find no trace of its use among the nations bordering on the Mediterranean. Evidently those old appreciators of all the luxuries of the senses would have left us some account of it if they had ever known the virtues of fine-cut or experienced the pleasure of a good Cabaña. But we find no record of narcotic indulgences in Horace, Lucretius, or Juvenal, nor does Anacreon dream of the fragrant cloud which might have appropriately enveloped Bacchus and Silenus after their orgies.

In an ably-written article in the *Proceedings of the Academy of Natural Sciences*, vol. xi. p. 93, Major John Le Conte gives the result of his very extensive reading on the subject. He quotes from Herodotus (Clio, 202) a description of the orgies of the Scythians, in which they intoxicated themselves by inhaling the fumes of certain berries thrown upon hot coals, or even, in purifying themselves after funerals, crept under tents filled with smoke produced by throwing these berries upon hot stones.

Solinus, Pomponius Mela, and Strabo record a somewhat analogous custom among the Thracians,—the latter calling those who seek this method of excitement καπνοβίται, smoke-livers, or καπνοπάται, smoke-walkers (did they use pipes?): but all these probably refer to the seeds of hemp. But Dioscorides mentions in his Materia Medica, lib. iii. c. 126, the use of the smoke of *Tussilago farfara*, drawn through a tube, for the cure of dry cough, or orthopnœa (asthma?). Caius Plinius (lib. xxvi. cap. 15, 16) recommends this, and also the *Hyoscyamus niger*.

Among later travellers, the first to notice the use of tobacco (except the Spanish discoverers in America) is Keeling, in 1507. The next is Kaempfer, in 1560, who speaks of its use in China, where Isbrand Ides, in 1692, says it was universal among men and women. But in 1607, Fitch says the negroes in Sierra Leone cultivated it extensively. In 1558, Andrew Thevet imported it into France; but it was little known there until Jean Nicot, ambassador from France to Portugal, sent some seed to France, during the reign of Charles IX., with a box of snuff to Catherine de Médicis. The latter suffered from that scourge of the gouty high-livers of those times, the *migraine*, and was, or seemed to be, much relieved by the use of the weed, which immediately became fashionable. We have all heard of Sir Walter Raleigh's exploit in weighing the smoke and winning Elizabeth's guinea, and of the frightened servant who doused him with beer, supposing him to have taken fire, and of King James I.'s Misocapnus and Counterblast against Tobacco. Perhaps the severe sumptuary laws of Michael Fedorovitch in Russia, and of Amurath IV. in Turkey, are less well known; so also those of Sefi, King of Persia, who poured melted lead down the throats of inveterate smokers, and whose grandfather Abbas, by the way, amused himself by filling the pipes of his courtiers, after a sumptuous banquet, with horse-dung, and when they declared the aroma to be delicious, exclaimed, "Cursed be the drug that cannot be distinguished from horse-dung!"

In passing now to the effects of tobacco upon the system, we will not dwell upon the novitiate of the smoker or chewer, with its horrors of nausea, vertigo, diarrhœa, profuse sweating, etc. etc.,—"usque ad deliquum animi,"—because these belong rather to the poisonous effects of the drug than to the more medicinal ones, so to speak, for which it is made use of, and happen generally only to those who have not as yet found their dose. Individual susceptibility varies greatly, just as with opium or Indian hemp. Nor is it necessary to enlarge upon the comfort with which, when harassed and wearied with the world and its cares, one lights a good cigar or pipe and sits calmly down to ruminate over the affairs of the day, or to build castles in the air, as satisfactorily as though one were "cloud-compelling Jove" himself. All these things are familiar to most of us,—nay, more so than "twice-told tales;" nor can their delights and seductions be made known to those who have never felt them.

One accusation against tobacco I feel bound here to repel,—viz., that it leads to alcoholic indulgence. This I have never seen; on the contrary, it has always seemed to me to be in some measure an antidote both to the effects of alcohol and to the craving for it in old dipsomaniacs. It has been ranked as a cerebral stimulant or excitant, and said to promote the processes of deep thought and long-continued mental activity. This also, I think, is an error, so far as its physiological action goes. It rather obtunds general and special sensibility, and lowers muscular power, indisposing for active exertion or for the reception of external impressions. Left thus, as it were, to itself, the mind roams at will over the impressions previously received, and arranges them—often kaleidoscopically, however—without being disturbed by fresh impressions from without. Thus it may arrive at greater generalizations than were possible when it was constantly receiving new facts; just as when we are in the smoke and hurry of the battle-field the great movements of troops are not so readily distinguished from the small skirmishes which are going on around us. I cannot help thinking that this calmative, deliberative effect of tobacco may be one secret of its great attraction for many whose minds are kept in a constant whirl by the battle of life,—whose restless activity needs some check, such as Harley has pointed out in the use of succus conii in chorea.

Another marked effect of tobacco, in my experience, is the increase of secretion from the gastro-intestinal mucous membrane. This action seems to take place from the mouth to the anus. The increased flow of saliva, none will doubt. Whether the flow of gastric juice is increased or not, I have no means of ascertaining, but I have repeatedly seen cases of dyspepsia benefited by moderate smoking; this, however, may be due to its decidedly laxative effect on the bowels, or to the habit acquired of sitting quietly and smoking for fifteen minutes to half an hour after eating. Certain it is, that a frequent cause of what has been not inaptly termed the "American disease" is the pernicious habit we indulge in of bolting a hasty meal and plunging at once into

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absorbing business pursuits, thus depriving the stomach of the due share of nervous influence it should have to enable it to perform its function properly. Immediately after eating is the time a smoker most feels the need of his luxury; and many men will for the sake of this, and for nothing else, take the needful interlude from the scramble for dollars and cents. Carried a step too far, the secretion becomes perverted, digestion is interfered with, and fermentation supervenes; but the same is the case with ipecacuanha, small doses of which increase the appetite and promote digestion, while larger ones cause prompt evacuation of the stomach and bowels. The action of tobacco upon the latter, in moderate quantities, is laxative and cholagogue, resembling that of senna, and hence useful in obviating the habitual constipation which is one of the banes of our civilized life.

Another effect of tobacco is its antaphrodisiac tendency. While increasing the secretion from the gastro-intestinal mucous membrane, it seems to lessen that of the genital tract, perhaps by rendering the urine more abundant and less stimulating, but probably also by its action on the great centres of the sensorium commune, and also by obviating constipation, with its resultant pressure on and irritation of the prostate. Here the old doctrine of *ubi irritatio ibi fluxus* comes in play. I have seen the tendency to sexual dreams and self-abuse markedly diminished by the moderate use of tobacco; but, in this connection, it is to be borne in mind that the habit of revery is apt to be formed by smoking,—and a revery, too, uncontrolled by the will. In this state, prurient fancies, not resulting in outward acts, leave a tendency to a recurrence of sexual emotions in the semi-congested nerve-centres, which may assert themselves with renewed force when the depressing influence of the tobacco has passed off. Hence, while it may do a young man, who has not learned self-control, good, to have such a bridle put upon his passions, he ought to be especially careful, then, to avoid lascivious thoughts, which will, like furies, afterwards return to goad him.

If space permitted, it would be interesting here to quote a summary of the results obtained by Blatin, who has carefully experimented on animals with the object of obtaining a clearer insight into the action of tobacco.

But from the consideration of what has been given, I think we may infer that tobacco is a sedative narcotic, to be ranked with bromide of potassium, digitalis, aconite, and conium; not less in its power than any of these, but rather more dangerous, though our familiarity with it may lead us to think otherwise. Blatin not inaptly sums up the subject:

"Suppose that one were to stop the first passer-by, and were to hold the following language: 'Here are the leaves of a plant of distant origin: cut, bruise, and pulverize them, and, when properly prepared, smoke, chew, snuff them. At your first attempts you will experience, it is true, some vertigo, faintness, nausea; perhaps you may lose your last meal, have headache, or colic; an abundant diarrhœa may even terminate the scene; but don't be disturbed,—these accidents are only the preludes, and you will easily surmount them. Then progressively increase your doses, and you will soon feel the effects of this marvellous plant. Your digestion, ordinarily good, will become troubled; you will be exposed to sore throat and affections of the mouth. Your pulse will sometimes beat irregularly, which will certainly inconvenience you a little, for, the movements of the heart being irregular, you may have fainting-fits. But all this will be nothing if you experience no difficulty in respiration; if your eyesight loses none of its clearness; if you have no cerebral congestion; if you become neither monomaniac, nor epileptic, nor hemiplegic, nor ataxic, nor paralytic: all of them affections to which, it must be avowed, you will be strongly exposed.' What would the passer-by answer to such a discourse? Perhaps he would think he was made game of; or perhaps he would take his interlocutor for an escaped inmate of Charenton. And, yet, what would he say if, approached again, he should be told that this poisonous plant, which one seemed crazy to propose, was an article of his daily consumption?—that tobacco had been spoken of, and that all the evils arising from it had not been enumerated? . . . Nothing, doubtless; but, after a few steps, he would light a cigar. Habit has thus become a second nature to him."

I wish I could say that the above is merely a frightful picture of fancy without foundation in fact; but candor will compel us to acknowledge that there is a fearful amount of truth in it. To which of us will not recur illustrative cases? Yet, for all this, shall we abandon its use entirely? I have endeavored to hint at some ways in which tobacco may be useful,—some conditions of system and circumstances of society in which we may derive benefit from its use, but just as we may from alcohol, or opium, or ipecac, or senna. In such cases let it be used with moderation, and with the same fear of its possible bad results as experience has taught us of other drugs. If this, its true position, were widely recognized, we should soon see less of its fearful abuse than we do at present. How much the lowered power of resistance to acute disease, and the necessity for stimulating instead of depleting treatment, how much the so-called typhoid cycle of disease, is due to this depressing cause, we can but guess. How far the depressed and debilitated nervous system of the parent may show itself in debilitated and scrofulous offspring, is another question, which a future generation may be able to answer from sad experience; for undoubtedly the consumption of tobacco among us is terribly on the increase. The amount raised in the United States in 1840 was 219,000,000 lbs., while that in 1860 was 428,000,000 lbs.; while the production in the world at large was estimated at 1,000,000,000 lbs. The export from the United States in 1860 was 150,000,000 lbs., while the import from Cuba was probably 2,000,000; thus making our consumption in 1860, 280,000,000 lbs., or, assuming our population then at 36,000,000, about 7½ lbs. per annum to every man, woman, and child!

MILK DIET IN DISEASE.

BY S. WEIR MITCHELL, M.D.,

Member of the National Academy.

(Continued from page 21.)

IN my last paper I described the mode of using milk as advised by Carel, with such alterations as I have found advisable. I limited my cases chiefly to gastric maladies, and to neuralgias resulting from these. I am well satisfied, however, that in Bright's disease, in the earlier stages, the same treatment will be found satisfactory. I recall, as I write, several cases, of which I have no complete notes, where such patients took large amounts of milk with good results. I regret the very brief details which I can give as to these histories:

Case I.—A young lady of 23 years had scarlet fever in May, followed in the fourth week by bloody urine, which, passing away, left her with a pretty free discharge of albumen. She was ordered twenty drops of tr. ferri chlorid. in red orange syrup four times a day, and to go to the sea-shore. She left early in July, and about July 20 I saw her again. The albumen had lessened somewhat, but her face was a little swollen, and the iron, causing intense headache, was abandoned for gallic acid, which served no useful purpose. In September the urine contained albumen as before, had a sp. gr. of 1014, and a heavy deposit of cystic epithelia, with numerous finely granular tube-casts.

I then persuaded her to use the milk diet, which she followed strictly, with a steady and rapid lessening of the albumen. At the third week I ventured to recommence the iron,

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and found that it no longer caused headache. Under these means she gradually improved, and in three months was free of every trace of disease.

Case II.—I have now under my care a far-advanced case of contracted kidney, in which I have three times made use of milk diet, with the grateful addition of buttermilk. In every instance the albumen has diminished, the œdema disappeared, and the head-symptoms which were threatening have vanished. The milk in this case is never borne well for more than three weeks, and then slowly loses value as it ceases to agree with the stomach.

Case III.—C. H., a farmer from Jersey, came to me a year ago with enlarged liver and spleen, sallow skin, and albuminous urine. His water contained rare granular tube-casts, with infrequent blood discs, and had a sp. gr. of 1016. There was ample evidence of hard drinking and of malarial poisoning,—for which he had taken freely arsenic, iron, and quinine. Under the absolute use of milk and buttermilk, with only the unsweetened morning coffee as a laxative, he instantly improved. Before taking these he lost one or more meals daily, and could do no work. At the close of two weeks he wrote to me that he could work part of each day,—that he had lost no milk by emesis, and was gaining flesh,—having taken after the first week two quarts of milk and a pint and a half of buttermilk daily.

At the third month I saw him, still a milk feeder, having added only bread to his diet. He then lost no albumen. The liver and spleen were much reduced, and he had gained fourteen pounds. He recovered entirely.

There have been other cases—several, indeed—in which milk either did no good in albuminuric maladies, or else could not be taken, owing to disgust or loss of gastric tone. I only wish to point out that in some cases it has proved of service, and that even in hopeless instances it may serve to retard the inevitably fatal event.

The following case I give very nearly in the language of the patient, a gentleman of considerable medical knowledge. It is very interesting as an example of the use of one of the modifications of milk diet in the form of buttermilk.

Case IV.—E. C., æt. 38. Early in 1863 he suffered from pain in the region of the right lobe of the liver, a pain nearly constant, but not very acute. It was regarded as rheumatic. Six months later a tumor appeared over and below the anterior portion of the seventh rib,—the pain increasing as the mass enlarged. Ease was had only when the body was bent to the right side. After careful examination, this tumor was regarded by the patient and his surgical attendant as fatty,—the pain being due to pressure upon the intercostal nerves.

Jan. 7, 1864, the mass was opened by an incision preparatory to its removal; about six ounces of glairy albuminous fluid escaped, and it was then determined to stuff the cavity with lint, as the patient, who had not been anæsthetized, was unwilling to allow of the attempt at excision. Next day "irritative fever" set in, and soon took a typhoid type, with total suppression of urine, delirium, dry tongue, and the usual symptoms. The suppuration caused by the lint in the cavity continued up to July, 1865,—two months after the buttermilk diet was begun,—eighteen months from the time of the incision. During about four months of this time there was a sensation of heat over the renal region; the urine contained no albumen; but during January, 1865, he was suddenly attacked with diuresis which came and went. In these spells there was albumen in the urine, and transparent tube-casts. He would often pass as much as twelve ounces of water every half-hour. At this time I first saw him: the wound was suppurating, his pulse was 120,—thirst excessive, incessant flow of strongly albuminous urine. Beneath the diseased rib, which was rough and carious, the whole of the organs seemed to be involved in a mass of inflammation. The liver-dulness extended two inches below the navel in the centre, and on the right side to the crest of the ilium. The right lung was hepatized halfway up, and posteriorly the dulness was continuous into the renal region. The dejections were gray. There were several severe pulmonary hemorrhages, with cough and purulent expectoration. Under the free use of tinct. ferri chloridi he gained ground, the albumen lessening but not ceasing, and the urine diminishing in amount. In May of the same year, still excessively feeble and emaciated, he went to the country. He writes to me:

"At this time I weighed 127 pounds. On fine days I was assisted out into the sun, and left for some hours with a pail of buttermilk and a ladle. With these alone I supplied myself with my only food and drink, if I except six or seven lemons daily; and thus I lived for months. My salivary secretion was too scant to make a bolus. No gain took place in the character of the urine, but I gradually gained strength, so that I could go out without help. In two months I could carry a gun, and in two more the diuresis grew less, so that I had to rise only twice a night. Then I ceased to improve. I here thought I had been four months in the country, and that a trip to the impure air of the city might enable me on my return to gain ground again: I think I was right. On my return to the country I seemed to receive a new impulse, and my recovery was rapid. I then went periodically to the city, with, I think, great benefit. I still continued through the winter at a hotel in the neighborhood, skating and gunning, and at the end of eleven months had gained eighty pounds. Strength fully restored; urine still albuminous." He spent the summer at the sea-side, and again returning to the country remained there until January, 1867. He adds at this time, "I resumed my occupations, with still a trace of albumen in the urine. I then discontinued examining it for six months, when it had entirely disappeared. I believe I had albuminuria fifty months, and consumed in eleven months four hundred gallons of buttermilk."

I have seen Mr. C. recently, a very sturdy and vigorous man.

There can be little doubt that the inflammation from the diseased rib reached and involved the lower lung and right kidney. Perhaps, as an example of what an alterative nutrient diet may do, his case is not easy to match; and it loses nothing by his graphic sketch of the symptoms,—as to which rather more detail would have been desirable.

The cases of nervous maladies in which I have used milk have by no means resulted so favorably as those of gastric disorder, but I have seen some very interesting results among the most intractable of such diseases. Here, for example, is a case of supra-orbital neuralgia, with an obscure relation to stomachal disorder.

Case V.—C. A., seamstress, æt. 31, married; suffered great blood-losses two years back, at the birth of the youngest of four children. A few days after getting up, she had an attack of pain over the left eye, and this recurred at lessening intervals, without any gastric troubles and with no suspicion of malaria. After the pains had lasted a year, I saw her. The attacks then returned about four or five times a week, and began with a spot of intense torture at the point of exit of the supra-orbital nerve, whence it diffused itself in a few minutes over the forehead, rarely appearing in the infra-orbital neural distribution. The paroxysm began with a chill, and ended with quickened pulse and flushed visage, and also with discharges of wind. This was the sole link connecting the pain with the stomach: so that I suspect the flatulence to have been rather consequence than cause. At all events, every kind of treatment addressed to the stomach was tried in vain, and, under several physicians, she took quinine, arsenic, iron, cod-liver oil, narcotics, and the host of minor remedies which belong to the therapeutics of despair. The malarial theory was of course fully tested with quinine, and failed. As to the local resorts, they were many, and left their mark.

I proposed but two means of treatment,—the milk cure, and, failing this, section of the nerve. I sent her home to a village in the neighborhood, with full directions as to the use of milk, and then heard no more of her for several months, when she came to my office. It seemed that the milk was used two weeks before any relief was obtained. During this time she gave up, very courageously, and by degrees, the morphia which she previously took to the extent of three grains in each attack. At the third week the gain was great,

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as to lessened pain, rareness of attack, and general improvement in tone and strength. She was still getting better when she visited me,—the attacks occurring only once in a fortnight, and being trivial. She was still living chiefly on milk, and continued so to do. I have learned that she is now entirely well.

I am sure in this case of the value of milk diet, and uncertain what share the gastric organs had in the matter. I have felt very often that the constant and great use of morphia, by lowering the general tone, and by its interference with many functions, greatly aided to perpetuate the state of system which neuralgias need to give them a long and sure foothold. The abandonment of the morphia would not, however, have been possible, in this case, without some previous alleviation of the pain which caused its use; and this difficulty is one which constantly presents itself in the treatment of old neuralgias.

(To be continued.)

BROMIDE OF POTASSIUM IN CROUP.

BY S. B. KIEFFER, M.D.,

Carlisle, Pa.

THE peculiar and acknowledged action of the bromides would indicate that they have a special control over the various nervous affections of the larynx, trachea, and other organs of the throat; but their special use in membranous croup has hitherto not been well established.

If, in this short paper, it shall appear that in this disease also, which has always been to the profession the occasion of much concern, there is a special disposition to yield to their power, I trust the profession will give the subject such attention as will demonstrate fully its truth. More than four years ago, my friend Dr. W. W. Dale was called, in my absence, to a case which he regarded as one of genuine membranous croup, and for which he prescribed an emetic, followed by repeated doses of calomel. On the following morning we saw it together, and the correctness of his diagnosis seemed very evident; but the little patient, a year old, had found no relief. Under the peculiar constitutional habits of the child, we both regarded the case as hopeless, and expected a rapid decline. For reasons which I shall explain hereafter, and as a matter of experiment, I gave the following prescription:

℞ Brom. of Potassium, gr. xx;
Chlorate of Potassa, gr. x;
Ipecac, gr. j;
Ext. of Liquorice, ʒss;
Water, fʒijss.

M. S.—A teaspoonful every hour, with directions to report after eight hours.

After the fourth dose the child became easier, the breathing less difficult and dry, and after the fifth hour it fell into a quiet and comfortable sleep, lasting three hours, when we saw it, and, to our mutual surprise, found it greatly relieved and much better. The treatment was continued, and at the end of the third day the patient was discharged. Since that time, both Dr. Dale and myself have depended exclusively upon this treatment, more or less modified according to circumstances, and *uniformly with success*. So confident am I that, when timely and judiciously administered, it has the power of arresting both the inflammation and the deposit of false membrane, that I now approach my patients, thus suffering, without fear, and with little anxiety. As there is no nausea, and the disease yields without emesis, it had not occurred to me to have demonstrative proof of actual membrane formed, until several months ago, when I was called into the country to see a patient aged four years, and who had now been suffering distressingly to the fifth day. This case, it seemed to me, was unmistakably one of membranous croup, and had been treated regularly by emetics, mild cathartics, blisters, etc., but it had stubbornly resisted them all, and was steadily growing worse, while the symptoms were apparently of the most aggravated character. My prognosis at this stage was decidedly unfavorable; but I gave the patient the bromide, in mixture, as before indicated, and on the following morning found it apparently much better. I now gave it, by means of the steam atomizer, a solution of bromide of potassium and chlorate of potassa topically, and continued the medicine, as before, every hour. On the following morning I found marked improvement, and ordered the medicine to be continued; and now, on again using the atomizer, assisted by my friend Dr. E. A. Grove, violent coughing ensued, and piece after piece of disintegrated false membrane was thrown off, demonstrating beyond a doubt its actual presence. The medicine was continued, and at the end of the fourth day the patient was regarded as out of danger, and on the following day was discharged.

I could not, after experiments from good authority, regard the bromide of potassium as *a solvent*, so to speak, of false membrane; nor have I ever thus regarded it; but I do believe, and on this principle I have prescribed it, that just in proportion as it is a *sedative* to the cerebro-spinal system directly, so it is a stimulant, indirectly, to the nerve-filaments and circulation of the throat; and, as the inflammation in membranous croup is usually, if not always, of the asthenic character, it has the power by its specific action of equalizing the circulation and arresting the fibro-albuminous deposit. And when the disease is not too severe, or has not progressed too far, the system thus, by its own inherent power, will be equal to the task of repairing the evil.

The experience of my friend W. W. Dale, M.D., who has been using the same treatment, though in the earlier stages of the disease he carries the use of ipecac to nausea, and frequently combines quinine with the mixture (a necessity rarely called for, I think, when the nausea is avoided), is substantially the same; and I here speak by his authority when I state that membranous croup, spasmodic croup, and laryngitis, alike, have lost for him, as they have also for me, nearly all that dread and anxiety with which he once met them.

I trust my professional brethren will give it a trial.

A SINGULAR CASE OF NERVOUS DISEASE.

BY J. CUMMISKEY, M.D.,

One of the Physicians to St. Mary's Hospital.

S. B., a German woman, unmarried, æt. 45, by occupation a cook, came under my care some six years ago, suffering from typhoid fever. The fever ran its usual course, and was rather mild in character; but, while convalescing, she was attacked with spasms of a singular character, and unlike any that I had ever seen before.

After getting into bed, she would lose consciousness; her body and head would be thrown forward, in a semi-prone position; the right arm and forearm extended and thrown backward, the left upward and forward; the fingers of both hands tightly flexed upon the palms and embracing the thumbs; the thighs flexed upon the pelvis,—the legs upon the thighs; and in this condition of tonic spasm and unconsciousness she would remain for periods varying from fifteen minutes to two and three hours, and sometimes even longer. After the attack she would feel quite exhausted, and would experience an aching sensation in the back. These spasms recurred almost every night in the beginning, and after a time they commenced to attack her during the day also,—one, two, three, and four spasms sometimes occurring during the twenty-four hours.

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Generally she would feel a pain—a "twisting pain," she called it—about the middle of the dorsal spine, a few minutes before the attack, which she came to look upon as a sure indicator of the coming trouble. Examination of the spine revealed considerable tenderness about the middle of the dorsal vertebræ, and nowhere else. This one spot, whenever examined, was always complained of.

Since the commencement of these spasms she has had but three lengthened periods of intermission or relief,—one of four months, one of twelve months, and the last of two months. She has never been confined to bed on their account, except when they have recurred several times a day, when she has felt too much exhausted to go about. She has suffered from almost constant headache, debility, constipation, and loss of appetite.

She can be aroused from these attacks, if spoken to in a peremptory tone; but in a few minutes she relapses into the same unconscious and rigidly-flexed condition. The catamenia ceased about six months ago. She is of an emotional disposition, and it has been noticed that a slight, or any unpleasant occurrence, will be very sure to provoke a spasm.

The treatment has been chiefly of a tonic character. A number of articles have been used, with little permanent effect. Bromide of potassium, in doses of twenty grains, twice, and sometimes thrice, a day, seems to have done more than any other article of the materia medica towards preventing the recurrence of the attacks. When this medicine was taken regularly, the spasms were of shorter duration, less frequent, and intermissions of one and two weeks oftener obtained. At the present time she is enjoying one of those occasional periods of relief, after a protracted and very severe series of attacks, which were so frequent as to oblige her to keep her bed.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF WILLIAM PEPPER, M.D.,

One of the Attending Physicians to the Hospital.

TUBERCULAR MENINGITIS IN AN ADULT, FOLLOWING DISSEMINATED CHEESY DEPOSITS IN THE LUNGS.

ANTONIO GOMEZI, a Portuguese seaman, 45 years of age, barely able to speak a few words of English, was admitted to the medical ward of the Philadelphia Hospital, February 9, 1871. The few facts in regard to his past history which could be ascertained were derived from his own statements, and amounted only to this: that he had been suffering with a cough for nine months, but had never had hæmoptysis. There were marked emaciation and weakness. Two days after admission, he became extremely dull and heavy, lying with his eyes closed, answering questions with reluctance and difficulty, and showing decided irritation at being disturbed. On February 14, his mental condition was about the same: he was also very restless at night, talking much in his sleep. His face was flushed, the pupils equal and small; no strabismus; marked arcus senilis. The skin was hot, temperature in evening reaching 103° F. The tongue was dryish, with brown fur in centre; the belly was retracted, and the bowels were constipated. The urine was high-colored, and free from albumen. The pulse was feeble, regular, 120 to 144 in the minute; the respirations 42, short and expiratory. There had been but little cough since admission. On physical examination, marked resonance was found everywhere throughout both sides of the chest. At the apex of each lung the resonance was exaggerated with an imperfectly pronounced cracked-pot sound from the apex down to the third interspace on both sides. The respiratory murmur at the apices was harsh, with blowing inspiration and with prolonged blowing expiration. There was also occasional scattered moist crackling at the apices and along the antero-superior portion of the left lung: elsewhere the respiratory murmur was normal. On drawing the finger over the forehead, a distinct and very persistent red streak appeared.

Later in the same day he grew weaker, with feeble, frequent, irregular pulse, subsultus tendinum, and strabismus. He still could be roused. On the following day consciousness was entirely lost. The red streak could still be developed by drawing the finger over the forehead. Pulse innumerable, small, and irregular. Temperature 101° F. Death occurred at 2 P.M., six days after admission.

The most interesting question in connection with this case was undoubtedly that of diagnosis. The very imperfect history obtained pointed to some chronic pulmonary or bronchial affection, but by no means explained the alarming symptoms which developed themselves within forty-eight hours of the man's admission; and it was evident that he was suffering from some acute attack supervening in the course of his chronic pulmonary disease. The mental hebetude and delirium, the extreme prostration, the hot, dry skin, frequent pulse, dry, brown tongue, all forcibly suggested the development of one of the continued fevers. When it is remembered, further, that the bowels were costive and the abdomen retracted, and that the patient was a sailor, recently from shipboard, it might well be thought he was suffering from an attack of typhus fever. There were, however, several symptoms absent which might have been expected had the case been one of typhus. The mental condition was not such as is usually found: the degree of hebetude was not very deep, but the patient rather lay profoundly quiet, with fixed, vacant expression, showing, when addressed, either entire want of attention or querulous irritability. There was no injection of the conjunctivæ; and, still more important, there was no eruption. It must be confessed, however, that the diagnosis would have been very obscure had it rested only on this negative evidence. The mental condition was not a reliable guide, and the eruption might have been retarded. But there was also positive evidence in favor of a widely different view of the case. In the first place, the mere fact of there having been chronic cough, with emaciation and loss of strength preceding the appearance of cerebral symptoms, roused the suspicion, as it should always do in similar cases, of there being old tubercular disease of the lungs, with an acute development of tubercular meningitis. There was one symptom also which to a certain extent supported this view. This was the persistent red streak which appeared when the finger was drawn across the forehead. This red streak evidently depends upon some peculiar condition of the peripheral vessels, or of the vaso-motor filaments which control their calibre, and, despite the fact that it is absent in some cases of positive inflammation of the meninges, is a sufficiently constant symptom to merit the term *tâche méningitique*. All of the other symptoms, too, were entirely accordant with this view. The pulse presented the characters of great frequency with continuance of regularity which mark the first stage of tubercular meningitis; although the various stages of the disease are not so clearly distinguished by the pulse-changes in the adult as in the child. In turning, then, to the physical examination of the lungs in the hope of determining this question, it will have been observed that the signs were far from positive. There were in no part of either lung distinct evidences of consolidation or of a cavity. Still, the blowing inspiration with prolonged blowing expiration, the occasional moist crackling râles, were just such sounds as might be caused by scattered tuberculous or cheesy deposits of small size, beginning to undergo softening. The presence of a distinct cracked-pot sound over both apices, without any of the signs of cavity (a condition found pretty frequently in children, but rarely in adults), appeared explicable only by the relation which small areas of consolidated lung bore to the bronchi at or near their point of subdivision, thus approximating the condition of small branching cavities with firm walls. Taking into account these various considerations, the diagnosis of disseminated softening tubercles(?) in the lungs, with acute miliary tuberculosis of the meninges, was stated. The further course of the case was critically studied, and when on the fifth day the pulse became irregular, strabismus appeared, and the hebetude deepened into coma, the diagnosis was, unfortunately, too surely confirmed.

Death occurred rather speedily, as is usually the case in tubercular meningitis of the adult. The temperature fell towards the close (marking 101° F. on the morning of the day of death), instead of continuously rising, as is sometimes observed in meningitis.

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At the *autopsy* the brain was found quite healthy, with the exception of some patches of thickening of the lining membrane of the lateral ventricles, and a slight excess of serum contained in them. Formations of very fine gray miliary tubercles were found in the subarachnoid space over the optic commissure, and also in the fissure of Sylvius on both sides, over the anterior extremity of the middle lobes, and over the anterior surface of the medulla oblongata and pons varolii. There was some opacity of the arachnoid at these deposits, but no appreciable amount of inflammatory exudation.

The left lung was firmly adherent throughout, the pleura being much thickened. The right lung was entirely free from adhesions. Both lungs were thickly studded with disseminated tubercles, some of which were still gray, while others were becoming cheesy. These were most abundant in the upper lobes. In addition to these recent miliary formations, the left lung contained numerous scattered cheesy deposits of larger size (⅓ to ½ inch in diameter), which were undergoing softening, so that in places in the left upper lobe minute cavities existed. The right lung contained fewer of such nodules. These larger cheesy deposits were especially numerous in the upper lobes, clustering about the bronchi.

The liver was of normal size, but fatty. The spleen was large (11 oz.) and soft, but contained no tubercles. The kidneys were congested, not enlarged (13 oz. together). They both contained several minute gray miliary tubercles scattered through the cortical substance.

The pathological process which had been present here was evident, and confirmed satisfactorily the evidence of the clinical symptoms. The patient had suffered for nine months with a cheesy broncho-pneumonia, leading to the development of numerous scattered areas of cheesy consolidation with advancing softening.

At the time when softening began to progress actively in the left lung, the peculiar constitutional infection leading to miliary tuberculosis occurred, with the development of miliary tubercular formations in the lungs and kidneys, and in the membranes of the brain.

CASE OF DIFFICULT LABOR FROM CONTRACTED PELVIS. CRANIOTOMY.

SERVICE OF J. S. PARRY, M.D.,

One of the Attending Obstetricians to the Hospital.

Reported by W. Penn Buck, M.D.

CATHERINE JONES, æt. 19; single; a native of Pennsylvania; primipara. Admitted to the obstetrical wards August 29, 1870. Excepting ophthalmia, probably gonorrhœal, she was perfectly well until November 5, at 9 P.M., when she went into labor. She was a stout, healthy-looking girl. Her pulse was normal, of good volume and force, and her pains were strong and frequent. The os was small, and the neck soft and about one-quarter of an inch long, admitting the index-finger to the first joint; vagina cool. Was first seen by Dr. Buck at three o'clock of the morning of November 6, when he ordered a two-grain opium suppository. This did not stop her pains or produce sleep. At 6 A.M. of the same day the os dilated to the size of a silver quarter-dollar. Immediately around the os was a well-defined hard ring. The pain was now very violent, and she was bearing down terribly. Ordered another two-grain opium suppository. This had no effect on her pains, which continued unabated. At quarter-past eleven, the os being fully dilated, the membranes, which were very thick, were ruptured, and there flowed away more than an average quantity of liquor amnii. The position was determined to be a right occipito-posterior. Between one and two in the afternoon the woman was rather drowsy, the pulse getting feeble, and its frequency increasing: her pains continued violent, while the head did not descend, nor did rotation occur. At eight o'clock in the evening her pains were very violent, and she was bearing down strongly. Tongue clean; pulse 140, feeble and compressible; face pale, without vomiting. The child's head did not seem to be very large. The arch of the pelvis was contracted, and the antero-posterior diameter was markedly diminished; but no actual measurement was made. The caput succedaneum was not large. The head was well flexed, immovable; neither ear could be felt.

At 9 P.M., the woman being etherized, and the contents of the bladder having been evacuated, the Hodge forceps were applied, with the greatest ease. Traction was made for nearly an hour, without moving the head. An attempt was made to produce anterior rotation, which failed, and the head rotated into the hollow of the sacrum. The Hodge forceps slipped, moving 1½ to 2 inches while the greatest compression was being made. This instrument was removed, and the Wallace forceps applied. These slipped some, but not so badly as the others. Notwithstanding the most violent traction and as strong compression as could be made, the head moved little, if any. The anterior wall of the vagina was very much compressed against the symphysis pubis.

At 11 P.M. the fœtal heart was still beating loudly. The woman was in a very precarious situation; pulse 160 to 180, irregular, small, and very compressible; surface cold; face pale and death-like. Shortly after, profuse vomiting set in, the ejected matter being thin, very dark, nearly black, and copious. She now appeared excessively ill, and we feared that she might perish undelivered. About half-past eleven P.M., Dr. Parry deemed it necessary to resort to embryotomy. Dr. Buck opened the head with Smellie's straight scissors; the brain was all broken up, and a part of the parietal and occipital bones removed by the Meigs forceps. Before attempting to deliver by the crotchet, the instrument slipped, and was abandoned. The Davis forceps were applied; but we could not make sufficient compression with them to deliver. The Wallace forceps were then tried, and compression made until the handles came together, and the head was delivered with difficulty, the perineum being torn about one and a half inches. Whiskey and ergot were administered. In ten minutes we detached the placenta. The uterus contracted well, but she lost several ounces of blood, apparently from the perineum. Whiskey and milk were given freely, with a mixture of chloroform, morphia, and peppermint water, every two hours. Weight of child, six pounds; length, 19⅓ inches; well developed; head rather large in proportion to body. The woman had a severe attack of puerperal fever, and for two weeks hung between life and death. She finally recovered, and was discharged from the house perfectly well.

EPISCOPAL HOSPITAL.

LIGATION OF EXTERNAL ILIAC ARTERY. RECOVERY.

BY JOHN H. PACKARD, M.D.,

One of the Surgeons to the Episcopal Hospital.

JOHN PIERCE, æt. 35, an Englishman, by trade a weaver, was admitted into the Episcopal Hospital, September 7, 1869, for an aneurism of the right femoral artery, very high up, close to Poupart's ligament.

He was in good general condition, but the aneurism, now as large as a small orange, had been growing for eleven months past, and giving him more and more pain. It first appeared about two years previously, when he got a fall, and strained the part.

Pulsation in the tumor was very strong and distinct, but there was no bruit. Pressure over the external iliac arrested the pulsation completely.

On September 10 he was placed under the influence of ether, and I applied a ligature to the external iliac artery, making the usual incision just above and parallel with the fold of the groin. The operation was one of no difficulty; the superficial epigastric artery required tying. The wound was closed with lead-wire sutures, and carbolic acid cerate applied; the limb was encased in cotton batting.

No symptom of note occurred until October 6, the twenty-seventh day, when the ligature was found lying loose in the wound. He had had no pain except from pressure on the heel; and this was readily relieved. Some neuralgic pain along the inner side of the thigh, especially down near the knee, lasted for some time after he began to walk about. He was discharged, cured, December 8, having been ninety-two days under treatment.

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THE MEDICAL TIMES.
A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

PUBLISHED ON THE 1ST AND 15TH OF EACH MONTH BY
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WEDNESDAY, MARCH 15, 1871.

EDITORIAL.

MEDICAL TEACHING IN PHILADELPHIA.

WE have reached a point where we can, with profit, cast a hasty glance at the present position of medical teaching in this city; and certainly there is enough of change and activity to attract a more than passing notice. In former years the middle of March marked the close of the "Annus Medicus," and, after this date, the schools vied with each other as to which should most quickly assume a tranquil and dignified inactivity. Their halls no longer echoed with the voice of professor, nor resounded with the busy hum of students; but for six long months of every year the profound stillness of utter desertion reigned supreme there. The classes in attendance during the winter were large, and many of the students came from such a distance that it was preferable for them to spend six months in Philadelphia than to return to their far-off homes. Yet but little was done to render their residence here during the spring and early fall profitable to them. A few courses of practical instruction in the wards of the Pennsylvania Hospital constituted the entire medical teaching during these months; and the student, after having attended the requisite number of didactic winter courses, and accumulated the necessary amount of technical and theoretical knowledge, obtained his diploma, but found himself still woefully deficient in clinical knowledge, and entirely ignorant of the minutiæ of any of the special branches of practice. Those who were sufficiently fortunate went abroad to acquire the special clinical knowledge which they were unable to gain in America; the rest were compelled to acquire this knowledge painfully, by their unaided efforts, in the hard field of private practice, or to rest contented with the position of mere routine theoretical practitioners. We are by no means exaggerating the defects of the system of medical teaching as it existed here and in all other American schools some years ago: the want we have indicated was recognized very widely and strongly, and several more or less unsuccessful efforts were made by extra-mural teachers to supply it.

Within the past few years, however, the schools themselves have been moving in this direction. The advance was inaugurated by the munificent liberality of Dr. George B. Wood, who founded and endowed an Auxiliary Faculty at the University of Pennsylvania, the professors constituting which should deliver courses of lectures upon branches of natural science during the spring months.

These courses of lectures afford the best chance which is available to the students of any medical school in America, for becoming acquainted with the elementary branches of scientific study, and thus fitting themselves for the performance of thorough reliable work and original scientific investigation. Although primarily intended for students of the University, and accessible to them without any extra charge, these Lectures are open, at a very small cost, to all earnest students of science; and, since the Board of Trustees have recently authorized the Auxiliary Faculty to bestow the degree of Doctor of Philosophy upon all graduates of medicine who have attended two courses of these lectures and passed an examination, there is no doubt that many will avail themselves of this privilege.

This generous act of Dr. Wood answered a double purpose; for while furnishing valuable opportunities of study during the spring months, and thus attracting students to remain in the city during that time, it also suggested strongly the importance of employing those months in imparting full instruction upon the practical, and especially the clinical, branches of medical study, which must always be much neglected during the crowded winter months.

Both schools promptly recognized this fact, and took vigorous measures to secure the desired result. A corps of experienced teachers was appointed in each school to conduct special instruction during the spring and autumn in clinical medicine and surgery, and in many important specialties, such as diseases of women and children, of the eye and ear, of the skin, and of the genito-urinary organs. Others were appointed to deliver special didactic courses upon physical diagnosis, operative surgery, morbid anatomy, and other equally important practical subjects. For the first time in the history of Philadelphia, medical students were invited to remain here from September to July, and assured that during every month of that time rich and varied opportunities would be thrown open to them. This period might well be called the Renaissance of clinical teaching: a deep sense of its supreme importance had long occupied the minds of the faculty and profession at large, and a strong determination expressed itself to render the clinical curriculum as complete and comprehensive as the didactic had always been. Not only, therefore, were the courses for the spring and autumn provided for those students who were able to remain in Philadelphia during those seasons, but arrangements were made to have regular clinical instruction given daily in conjunction with the didactic lectures throughout the entire winter.

We have glanced at the rapid development of the teaching of clinical medicine and surgery, and of important practical specialties, in this city during the last few years. It is a movement by no means limited to Philadelphia, for it has been going forward with more or less activity wherever medical science is taught; but it is with no little satisfaction that we find ourselves able

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MEDICAL DEPARTMENT.

(NINTH STREET, BETWEEN CHESTNUT AND MARKET.)

MEDICAL FACULTY.

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SAMUEL JACKSON, M.D., Emeritus Professor of Institutes of Medicine.

HUGH L. HODGE, M.D., Emeritus Professor of Obstetrics and Diseases of Women and Children.

JOSEPH CARSON, M.D., Professor of Materia Medica and Pharmacy.

ROBERT E. ROGERS, M.D., Professor of Chemistry.

JOSEPH LEIDY, M.D., Professor of Anatomy.

HENRY H. SMITH, M.D., Professor of Surgery.

FRANCIS G. SMITH, M.D., Professor of Institutes of Medicine.

RICHARD A. F. PENROSE, M.D., Professor of Obstetrics and Diseases of Women and Children.

ALFRED STILLÉ, M.D., Professor of Theory and Practice of Medicine and of Clinical Medicine.

D. HAYES AGNEW, M.D., Professor of Clinical and Demonstrative Surgery.

H. LENOX HODGE, M.D., Demonstrator of Anatomy.

CLINICAL LECTURERS.

WILLIAM PEPPER, M.D., Lecturer on Clinical Medicine and on Physical Diagnosis.

WILLIAM GOODELL, M.D., Lecturer on Diseases of Women and Children.

GEORGE STRAWBRIDGE, M.D., } Lecturers on Diseases
WILLIAM F. NORRIS, M.D., } of the Eye and Ear.

JAMES E. GARRETSON, M.D., Lecturer on Surgical Diseases of the Mouth.

The regular winter course of instruction begins on the second Monday in October, and continues until the last day of February.

EXPENSES.

Matriculating fee (paid only once) . .	$5
Fees for winter course of lectures . .	140
Graduating fee	30

R. E. ROGERS, M.D.,
Dean of the Medical Faculty,
University Building.

W. H. SALVADOR, *Janitor,*
University Building.

SPRING AND AUTUMN COURSE OF 1871.

Besides the regular winter course of instruction in the above branches, there will be a full course of clinical and didactic lectures, in addition to the courses of the Auxiliary Faculty, during the months of March, April, May, June, and September.

The lectures of the AUXILIARY FACULTY comprise the following subjects:

Zoology and Comp. Anat'y, by HARRISON ALLEN, M.D.
Botany, by HORATIO C. WOOD, JR., M.D.
Mineralogy and Geology, by FERD. V. HAYDEN, M.D.
Hygiene, by HENRY HARTSHORNE, M.D.
Medical Jurisprudence, including Toxicology, by JOHN J. REESE, M.D.

The branches of Natural History, forming the subjects of the three professorships first named, will be taught mainly with reference to their medical relations.

All students who have matriculated in the Medical Department, and have taken the tickets of two of the Medical Faculty, have the right of admission to the lectures. Attendance upon these lectures is not compulsory upon the students in the Medical Department.

The degree of Doctor of Philosophy will be conferred upon those medical graduates who shall have attended two courses of lectures, and have passed a satisfactory examination thereon by the Faculty. To such, a diploma will be granted by the University.

The following SPECIAL COURSES OF CLINICAL AND DIDACTIC INSTRUCTION will also be given:

Clinical Surgery, D. HAYES AGNEW, M.D.
Clinical Medicine, } WILLIAM PEPPER, M.D.
Physical Diagnosis, }
Microscopy and Urinary Chemistry, }
Diseases of Urinary Organs, } JAS. TYSON, M.D.
Diseases of Women and Children, WM. GOODELL, M.D.
Syphilis and Skin Diseases, HARRISON ALLEN, M.D.
Diseases of the Eye and Ear, { G. STRAWBRIDGE, M.D. / WM. F. NORRIS, M.D.
Surgical Diseases of the Mouth, J. E. GARRETSON, M.D.
Morbid Anatomy, JOSEPH G. RICHARDSON, M.D.

The Lectures will begin on Monday, March 20, 1871, and continue until June 17.

The Preliminary Lectures in the Autumn will begin on Monday, September 4, and terminate on October 7.

These lectures will be so arranged as not to interfere with the abundant clinical instruction given at the Philadelphia, Pennsylvania, and Wills Hospitals.

ALL MATRICULATES of the University are admitted *without charge* to these lectures.

LECTURES ON REGIONAL ANATOMY.

DR. H. LENOX HODGE will deliver a course of Lectures on REGIONAL ANATOMY, beginning March 21, 1871, and continuing during April, May, and June. The demonstrations upon the *cadaver* will be illustrated by preparations from the great museum of the University.

Every table in the DISSECTING-ROOMS has a stone top, which can be kept perfectly clean. There are marble wash-basins and private closets, in which students can keep their instruments, books, and clothing clean and safe. Careful attention has been paid to the light and ventilation. The *cadaver* is preserved and injected by new and better processes, and, as dissection is legalized in Pennsylvania, the cost is very small.

Tickets, $10.

Apply to
H. LENOX HODGE, M.D.,
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DR. C. T. HUNTER will give special instruction in Operative and Minor Surgery, including operations on the cadaver, application of bandages, &c.

Fee $10

For further information, address
R. E. ROGERS, M.D.,
Dean of the Medical Faculty,
University Building.

*** Alumni of the Medical Department of the University, and others who desire to receive the Catalogue and Announcement, are requested to send their addresses to the Dean, P.O. Box 2630, Philadelphia.

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JEFFERSON MEDICAL COLLEGE.

FACULTY.

JOSEPH PANCOAST, M.D., Professor of General, Descriptive, and Surgical Anatomy.
SAMUEL D. GROSS, M.D., LL.D., Professor of Institutes and Practice of Surgery.
S. HENRY DICKSON, M.D., LL.D., Professor of Practice of Medicine.
ELLERSLIE WALLACE, M.D., Professor of Obstetrics and Diseases of Women and Children.
B. HOWARD RAND, M.D., Professor of Chemistry.
JOHN B. BIDDLE, M.D., Professor of Materia Medica and General Therapeutics.
J. AITKEN MEIGS, M.D., Professor of Institutes of Medicine and Medical Jurisprudence.

J. M. DA COSTA, M.D., Lecturer on Clinical Medicine.
R. J. LEVIS, M.D., Lecturer on Ophthalmic Surgery.

WM. H. PANCOAST, M.D., Demonstrator of Anatomy.

The regular winter course of instruction begins in the early part of October, and continues until the last day of February.

EXPENSES.

Matriculating fee	$5
Fees for winter course of lectures	140
Graduating fee	30

For further information respecting the regular winter course, address

B. HOWARD RAND, M.D.,
Dean of the Faculty,
At the College.

THE ANATOMICAL ROOMS

Are open during the summer and winter course of lectures of the College.

From the excellent accommodations of the rooms, and the cheapness of material, students have great facilities of perfecting their knowledge of Anatomy. During the summer, an ample opportunity is afforded for dissection, as the lectures of the summer school are given in the morning.

Lectures will be given during the summer, in connection with the dissecting-rooms, on General and Descriptive Anatomy, as during the winter.

Fee $10

A course on Operative and Minor Surgery is given, in connection with the rooms, by the Demonstrator and First Assistant Demonstrator.

Fee $20

WM. H. PANCOAST, M.D.,
Demonstrator,
1100 *Walnut Street.*

DR. T. H. ANDREWS,
DR. H. LEAMAN,
DR. R. M. TOWNSEND,
First Assistant Demonstrators.

While it has not been found practicable to extend the regular course beyond the usual period, from October to March, yet the Faculty, wishing to afford the fullest opportunity to the student, have arranged a course of supplementary lectures, which extends through the months of April, May, June, and September, without additional charge, except the registration fee of five dollars.

SUMMER COURSE OF LECTURES.

THE SUMMER COURSE OF LECTURES in this College will begin on Monday, April 3, 1871, and continue until June 24.

A Preliminary Course on different subjects by the Summer School Faculty will be delivered, *free of charge*, in the autumn, commencing on the 4th of September, and ending on the 7th of October.

The Clinical Department of the course will be illustrated at the College, Wills Hospital, and the Philadelphia and Pennsylvania Hospitals, by members of the association, during their terms of service at these institutions.

The course will be strictly practical, embracing important specialties in Medicine and Surgery, with extensive clinical illustrations.

The Lectureships are constituted as follows:

Clinical Surgery . . .	PROFESSOR GROSS.
Medical Jurisprudence and Toxicology,	PROFESSOR RAND.
Materia Medica and Therapeutics,	PROFESSOR BIDDLE.
Alimentation in Health and Disease,	PROFESSOR MEIGS.
Clinical Medicine . . .	DR. J. M. DA COSTA.
Visceral and Surgical Anatomy,	DR. W. H. PANCOAST.
Operative and Minor Surgery,	DR. J. H. BRINTON.
Ophthalmic and Aural Surgery,	DR. R. J. LEVIS.
Venereal and Cutaneous Diseases,	DR. F. F. MAURY.
Pathological Anatomy . .	DR. W. W. KEEN.
Surgical Diseases of the Genito-Urinary Organs (*special attention will be given to the Clinical study of the Urine*),	DR. S. W. GROSS.
Laryngoscopy and Diseases of the Throat,	DR. J. SOLIS COHEN.
Insanity	DR. I. RAY.
Clinical Midwifery, with Cases,	DR. F. H. GETCHELL.

Attendance upon the summer course is allowed as office instruction, but does not count as a "session" of lectures.

The Preliminary Lectures in the fall will begin on Monday, September 4, 1871, and continue until the opening of the regular course. *They are free to all.* The dissecting-room will be opened at the same time.

Matriculates of the College will be entitled to attend the entire course on payment of a registration fee of $5. Non-matriculates will pay in addition $35, which will be deducted from the fees of the winter course when the tickets for that course are issued.

Abundant clinical instruction is also afforded throughout the entire year, without extra charge, at the Pennsylvania, Philadelphia, Wills, and Orthopædic Hospitals.

For further information respecting the summer course of lectures, address

F. F. MAURY, M.D.,
Secretary of the Summer Association,
At the College, or at 1218 *Walnut St.*

PHILADELPHIA, February 1, 1871.

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HOSPITALS.

PENNSYLVANIA HOSPITAL.

(227 beds.)

Physicians, J. F. MEIGS, M.D., J. M. DA COSTA, M.D., J. H. HUTCHINSON, M.D., J. AITKEN MEIGS, M.D.
Surgeons, ADDINELL HEWSON, M.D., WM. HUNT, M.D., THOS. J. MORTON, M.D., D. HAYES AGNEW, M.D.
Microscopist, J. G. RICHARDSON, M.D.
Pathological Chemist, HORACE B. HARE, M.D.
Pathologist and Curator, MORRIS LONGSTRETH, M.D.

Medical and Surgical Clinics throughout the year from 10 to 12 on Wednesdays and Saturdays.

Fee, $3 semi-annually.

PHILADELPHIA HOSPITAL.

(700 beds.)

Physicians, J. L. LUDLOW, M.D., ALFRED STILLÉ, M.D., WM. PEPPER, M.D., H. C. WOOD, JR., M.D.
Surgeons, W. H. PANCOAST, M.D., F. F. MAURY, M.D., J. H. BRINTON, M.D., H. ALLEN, M.D.
Obstetricians, R. M. GIRVIN, M.D., E. L. DUER, M.D., J. S. PARRY, M.D., GEORGE PEPPER, M.D.
Microscopist, JAMES TYSON, M.D.
Curator and Pathologist, WILLIAM PEPPER, M.D.

Clinical Lectures delivered throughout the year (with the exception of July and August) on Wednesdays and Saturdays. Lectures on Obstetrics and Diseases of Women, by Obstetrical Staff, at 9 A.M.; Lectures on Clinical Medicine, by the Physicians, at 10 A.M.; Lectures on Clinical Surgery, by the Surgeons, at 11 A.M. These lectures are free to all.

Special bedside instruction during April, May, and June: in Practical Medicine, including Physical Diagnosis and Application of Electricity to Diagnosis and Treatment of Disease, by Drs. W. PEPPER and WOOD; in Practical Surgery, by Dr. ALLEN; and in Diseases of Women and Children, by Dr. PARRY.

Dr. JAMES TYSON will deliver a course of lectures, during the above months, on Microscopy in Relation to Physiology and Medicine. Admittance free to all.

EPISCOPAL HOSPITAL.

(130 beds.)

Physicians, A. M. SLOCUM, M.D., J. C. MORRIS, M.D., HORACE B. HARE, M.D., HERBERT NORRIS, M.D.
Surgeons, JOHN ASHHURST, JR., M.D., WM. S. FORBES, M.D., SAMUEL ASHHURST, M.D., J. H. PACKARD, M.D.
Dispensary Staff, Drs. D. F. WOODS, J. G. RICHARDSON, E. J. SANTEE, W. SINKLER, H. S. SCHELL, W. H. FINN, E. C. HINES, J. V. INGHAM.

Dr. HERBERT NORRIS will give practical instruction in Physical Diagnosis at the bedside, during the months of April, May, and June, on Tuesdays and Thursdays, at 11 A.M. Fee, $10.

WILLS HOSPITAL.

(*RACE STREET, BETWEEN EIGHTEENTH AND NINETEENTH STREETS.*)

Attending Surgeons, T. G. MORTON, M.D., A. DOUGLASS HALL, M.D., R. J. LEVIS, M.D., GEO. C. HARLAN, M.D.
Assistant Surgeons, W. THOMSON, M.D., W. W. MCCLURE, M.D., H. E. GOODMAN, M.D., L. H. ADLER, M.D.

Daily Clinics at 11 o'clock A.M.

Operative Clinics on Wednesdays and Saturdays, at 12½ o'clock. Attendance free.

During the months of April and May, Dr. HALL will give Ophthalmoscopic demonstrations at the Hospital. Fee, $10.

ORTHOPÆDIC HOSPITAL.

(*NO. 15 NORTH NINTH ST., OPPOSITE UNIVERSITY OF PENNSYLVANIA.*)

Attending Surgeons, D. H. AGNEW, M.D., T. G. MORTON, M.D., H. E. GOODMAN, M.D., S. W. GROSS, M.D.
Attending Physician, S. WEIR MITCHELL, M.D.

Orthopædic Clinics on Mondays and Thursdays, at 12 o'clock.

Clinics for diseases of the nervous system on Tuesdays and Fridays at 12 o'clock. Attendance free.

ST. MARY'S HOSPITAL.

(85 beds.)

Attending Physicians, J. CUMMISKEY, M.D., C. PERCY LA ROCHE, M.D., W. LEHMAN WELLS, M.D., LUCIUS S. BOLLES, M.D.
Attending Surgeons, W. W. KEEN, M.D., J. H. GROVE, M.D., A. D. HALL, M.D., H. S. SCHELL, M.D.

Daily Dispensary service is held as follows: Surgical Diseases, Mondays and Thursdays, 1–3 P.M., Drs. T. B. REED and F. H. GROSS; Diseases of the Eye and Ear, Tuesdays and Fridays, 10½–11½ A.M., J. H. GROVE, M.D.; Medical Dispensary, Tuesdays and Fridays, 1–5 P.M., J. CUMMISKEY, M.D.; Diseases of Women, Wednesdays and Saturdays, 1–5 P.M., J. H. GROVE, M.D.

CHILDREN'S HOSPITAL.

(*TWENTY-SECOND STREET, BELOW WALNUT.*)

Physicians, HILBORNE WEST, M.D., JAMES H. HUTCHINSON, M.D., D. MURRAY CHESTON, M.D., WM. PEPPER, M.D.
Surgeons, H. LENOX HODGE, M.D., GEORGE C. HARLAN, M.D., JOHN ASHHURST, JR., M.D.

During the past year extensive additions to the hospital building have been completed. The institution now possesses ample space for the distribution and classification of patients, and offers excellent clinical facilities for the study of children's diseases.

GERMAN HOSPITAL.

(50 beds.)

Physicians, ALBERT FRICKÉ, M.D., JULIUS SCHROTZ, M.D., EMIL FISCHER, M.D., JULIUS KÆMERER, M.D.
Surgeons, THEODORE A. DEMMÉ, M.D., JOSEPH KOERPER, M.D., JAMES M. BOISNOT, M.D., AUGUSTUS F. MÜLLER, M.D.
Resident Physician, M. FRANKLIN, M.D.

ST. JOSEPH'S HOSPITAL.

(200 beds.)

Physicians, J. J. REESE, M.D., ALFRED STILLÉ, M.D., GEO. K. MOREHOUSE, M.D., WM. V. KEATING, M.D.
Surgeons, C. S. BOKER, M.D., W. F. ATLEE, M.D., E. A. PAGE, M.D., J. H. BRINTON, M.D.
Obstetricians, J. D. BRYANT, M.D., A. C. BOURNONVILLE, M.D.
Pathologist, JOSEPH LEIDY, M.D.

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SPRING AND AUTUMN SESSIONS OF 1871.

	UNIVERSITY OF PENNSYLVANIA.			JEFFERSON MEDICAL COLLEGE.			PENNSYLVANIA HOSPITAL.			PHILADELPHIA HOSPITAL.		
	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.
Clinical Medicine	Dr. W. Pepper	F 12.30	Free to all matriculants	Dr. Da Costa	M 12 M.	*	Dr. Da Costa Dr. Hutchinson	S 10 A.M. W 10 A.M.	$3 for six mos.	Dr. H. C. Wood, Jr. Dr. W. Pepper	W 10 A.M. S 10 A.M.	Free to all.
Clinical Surgery	Dr. Agnew Dr. Garretson	W 12.30 S 12.30	"	Dr. S. D. Gross	W S 12 M.	...	Dr. Hewson Dr. Agnew	W 11 A.M. S 11 A.M.	...	Drs. Pancoast, Maury, Brinton and Allen	W 11 A.M. S 11 A.M.	"
Clinical Midwifery & Diseases of Women and Children	Dr. Goodell	M 12.30	"	Dr. F. H. Getchell	F 11 A.M.	...	.....	.....	...	Dr. Parry	W 9 A.M. S 9 A.M.	"
Special Ward Instruction. *Clinical Medicine*	.....	.....	.....	.....	.....	...	Dr. Hutchinson	.....	...	Dr. W. Pepper Dr. H. C. Wood	Tu 8 A.M. F 9½ A.M.	$15
Special Ward Instruction. *Clinical Surgery*	.....	.....	.....	.....	.....	...	.....	.....	...	Dr. Allen	Twice weekly	$15
Special Ward Instruction. *Diseases of Women and Children*	.....	.....	.....	.....	.....	...	.....	.....	...	Dr. Parry	Twice weekly	$15
Diseases of Eye and Ear, and Ophthalmoscopy	Dr. Strawbridge Dr. Norris	Tu 12.30 Th 12.30	"	Dr. R. J. Levis	F 12 M.	...	.....	.....	...	.....	.....	...
Physical Diagnosis	Dr. W. Pepper	M 11. 30	"	.....	.....	...	.....	.....	...	.....	.....	...
Diseases of Genito-Urinary Organs	Dr. Tyson	Th 11.30	"	Dr. S. W. Gross	Th 10 A.M.	...	.....	.....	...	.....	.....	...
Microscopy and Urinary Chemistry	Dr. Tyson	M 10.30	"	.....	.....	...	.....	.....	...	Dr. Tyson	Tu 9 A.M.	Free to all.
Practical and Medical Chemistry	.....	.....	.....	.....	.....	...	.....	.....	...	.....	.....	...
Anatomy	Dr. Hodge	Tu F 11.30	$10	Dr. W. H. Pancoast	Tu F 10 A.M.	$10	.....	.....	...	.....	.....	...
Practical Anatomy	The Dissecting-room will be open throughout every day. Abundant material for dissection, at very small cost.			The Dissecting-room will be open throughout every day. Abundant material for dissection, at very small cost.			.....	.....	...	.....	.....	...
Syphilis and Skin Diseases	Dr. Allen	.....	Free to all matriculants	Dr. F. F. Maury	Tu 11 A.M.	...	.....	.....	...	.....	.....	...
Operative and Minor Surgery	Dr. Hunter	.....	$10	Dr. J. H. Brinton	Tu Th 12 M.	...	.....	.....	...	.....	.....	...
Pathological Anatomy	Dr. J. G. Richardson	In Sept. and Oct. 10.30 A.M.	Free to all matriculants	Dr. W. W. Keen	M 10 A.M.	...	....	.....	...	.....	.....	...
Laryngoscopy, Rhinoscopy, and Diseases of Throat	.....	... .	.....	Dr. J. S. Cohen	F 1 P.M. in Sept. and Oct.	...	.....	.....	...	.....	.....	...
Insanity	.....	.....	.....	Dr. I. Ray	Th 1 P.M. in Sept. and Oct.	...	.....	.....	...	.....	.....	...
Alimentation in Health and Disease	.....	.....	.....	Dr. J. A. Meigs	Tu F 11 in Sept. and Oct.	...	.....	.....	...	.....	.....	...
Materia Medica and Therapeutics	.....	.....	.....	Dr. J. B. Biddle	M Th 11 A.M.	...	.....	.....	...	.....	... .	...
Botany	Dr. Wood	M W F 4.30 P.M. Field-day on Sat. at 11 A.M.	Free to all matriculants who have taken 2 tickets. $10 to non-matriculants	.....	.....	...	.....	.....	...	.....	.....	...
Comparative Anatomy and Zoology	Dr. Allen	M W F 5.30 P.M.	"	.....	.....	...	.....	.....	...	.....	.....	...
Medical Jurisprudence and Toxicology	Dr. Reese	Tu Th S 5.30 P.M.	"	Dr. B. H. Rand	M Th 11 A.M. Sept. and Oct.	...	.....	.....	...	.....	.....	...
Hygiene	Dr. Hartshorne	Tu Th S 4.30 P.M.	"	.....	.....	...	.....	.....	...	.....	.....	...
Geology and Mineralogy	Dr. Hayden	Tu Th S 3.30 P.M.	"	.....	.....	...	....	.....	...	.....	.....	...

* $5 for matriculants; $35 for non-matriculants; for entire course.

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SPRING AND AUTUMN SESSIONS OF 1871.

	EPISCOPAL HOSPITAL.			WILLS HOSPITAL.			ORTHOPÆDIC HOSPITAL.			SPECIAL COURSES.		
	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.
Clinical Medicine	.....	.....	...	.....	.....	..	Dr. S. W. Mitchell	Tu F 12 M.	Free to all	.....	.....	...
Clinical Surgery	.....	.....	...	.....	.....	...	Dr. S. W. Gross	M Th 12 M.	"	Dr. Mears, at Penna. Coll. of Dental Surgery	W 11 A.M.	...
Clinical Midwifery & Diseases of Women and Children	.....	.....	...	.....	.....	...	.....	.....	...	Dr. Spooner, Obstetrical Department of Phila. Dispensary	W S 10 A.M.	$15
										Dr. J. G. Allen, Phila. Lying-in Charity	First Lecture Monday, April 3, 9 A.M.	$15
Special Ward Instruction. — *Clinical Medicine*	Dr. H. Norris	Tu Th 11 A.M.	$10	....	.....	...	.....	.....	...	.....	.....	...
Clinical Surgery	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Diseases of Women and Children	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Diseases of Eye and Ear, and Ophthalmoscopy	.....	.....	...		Clinic daily Course on Ophthalmoscopy	Free	.....	.....	...	Dr. Harlan	.....	$10
				Dr. A. D. Hall		$10				Drs. Norris and Strawbridge		$10
										Drs. Keyser and Collins		
Physical Diagnosis	.....	.....	...	.....	.....	...	.....	.....	...	Dr. J. H. Hutchinson	At convenient hour	$15
										Dr. O. P. Rex, at Phila. School of Anatomy	April 12, 9 A.M.	$10
Diseases of Genito-Urinary Organs	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Microscopy and Urinary Chemistry	.....	.....	...	.....	.....	...	.....	.....	...	Dr. L. J. Deal	.....	$10
Practical and Medical Chemistry	.....	.....	...	.....	.....	...	.....	.....	...	Dr. H. B. Hare	At convenient hour	$15
Anatomy	.....	.....	...	.....	.....	...	.....	.....	...	Dr. W. W. Keen, at Phila. School of Anatomy	W F S 8 A.M.	$10
										Dr. H. Allen, at Phila. Dental College	At convenient hour	$10
Practical Anatomy	.....	.....	...	.....	.....	...	.....	.....	...	The Dissecting-room of the Phila. School of Anatomy (Dr. Keen) will be open throughout every day. Abundant material for dissection, at very small cost.		
Syphilis and Skin Diseases	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Operative and Minor Surgery	.....	.....	...	.....	.....	...	.....	.....	...	Dr. W. W. Keen, at Phila. School of Anatomy	April 12, 9 A.M.	$10
										Dr. O. H. Allis, at Phila. School of Anatomy	"	$10
Pathological Anatomy	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Laryngoscopy, Rhinoscopy, and Diseases of Throat	.....	.....	...	.....	.....	...	.....	.....	...	Dr. Bertolet	At convenient hour	$10
Insanity	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Alimentation in Health and Disease	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Materia Medica and Therapeutics	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Botany	.....	.....	...	.....	.....	...	.....	.....	...	Dr. Maisch, at College of Pharmacy	Afternoon each week	$12
Comparative Anatomy and Zoology	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Medical Jurisprudence and Toxicology	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Hygiene	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...
Geology and Mineralogy	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...

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PHILADELPHIA LYING-IN CHARITY.

(126 *NORTH ELEVENTH STREET.*)

LECTURES ON PRACTICAL OBSTETRICS, SUMMER, 1871.

The Summer Course on Practical Obstetrics will be delivered by Dr. J. G. ALLEN, commencing Monday, April 3, at 9 A.M., and continuing, three times a week, to the end of June, at convenient hours.

The course includes a complete series of Lectures and Demonstrations on the principles of Obstetric Science and the practical details of the art of Midwifery, special care being taken to instruct the student how to be skilful in all the minor duties constantly required of the obstetrician in the lying-in chamber, as well as to prepare him to meet emergencies and manage difficult and dangerous labors. A portion of the course is devoted to familiarizing each member of the class individually with all the more important obstetrical manipulations, and particularly with the application of the obstetric forceps.

As many of the members of the class as desire it will have the obstetric patients of the PHILADELPHIA LYING-IN CHARITY assigned to them during any part or the whole of the period from the 1st of April to the 1st of October for their professional care and attendance, with the aid of the assistants, if necessary, and under the supervision of the Principal.

Fee for the Course, including practice, $15.

OBSTETRIC DEPARTMENT OF THE PHILADELPHIA DISPENSARY.

PRACTICAL OBSTETRICS AND DISEASES OF WOMEN.

Dr. E. A. SPOONER will deliver a course of clinical instruction on Diseases of Women in connection with this department, on Wednesdays and Saturdays, from 10 to 11 o'clock. Gentlemen are privileged to attend obstetric cases.

Tickets, $15.

DISEASES OF WOMEN AND CHILDREN.

Dr. JOHN S. PARRY will give practical instruction in these branches, during April, May, and June, in the wards of the Philadelphia Hospital.

Tickets, $15.

Apply to 1513 Arch Street.

PHILADELPHIA COLLEGE OF PHARMACY.

FACULTY.

ROBERT BRIDGES, M.D., Professor of Chemistry, No. 119 South Twentieth Street.

EDWARD PARRISH, Professor of Theory and Practice of Pharmacy, No. 800 Arch Street.

JOHN M. MAISCH, Professor of Materia Medica and Botany, No. 1607 Ridge Avenue.

ANNOUNCEMENT.

The annual courses of instruction in the College commence on the first lecture-day in October, at 7½ o'clock P.M., and will be continued tri-weekly, on Monday, Wednesday, and Friday, of every week, at seven and eight o'clock P.M., until the close of February.

The course on Botany, by Professor MAISCH, will be conducted during the spring and summer. For the present, one afternoon a week, commencing in April, will be devoted to these lectures and excursions into the country, affording to the students a means of becoming practically acquainted with the living plants.

Especial attention will be given to the art of dispensing medicines.

FEES.

For each Course of Lectures	$12
Matriculation Fee (paid but once)	4
Graduating Fee	10

PENNSYLVANIA COLLEGE OF DENTAL SURGERY.

(*S. E. COR. TENTH AND ARCH STREETS.*)

SIXTEENTH ANNUAL SESSION, 1871–2.

The Faculty consists of six professors, who are assisted in the operative and mechanical departments by two demonstrators and two assistants. The former deliver three lectures each per week, and occupy a portion of every Saturday in clinical operations. The hours from 9 to 11 A.M. and from 2 to 4 P.M. are occupied with the mechanical and operative branches, under the care of the demonstrators.

FACULTY.

T. L. BUCKINGHAM, D.D.S., Professor of Chemistry.

E. WILDMAN, M.D., D.D.S., Professor of Mechanical Dentistry and Metallurgy.

G. T. BARKER, D.D.S., Professor of Dental Pathology and Therapeutics.

JAMES TRUMAN, D.D.S., Professor of Dental Histology and Operative Dentistry.

JAMES TYSON, M.D., Professor of Physiology and Microscopic Anatomy.

J. EWING MEARS, M.D., Professor of Anatomy and Surgery.

J. M. BARSTOW, D.D.S., Demonstrator of Mechanical Dentistry.

ELIHU R. PETTIT, D.D.S., Demonstrator of Operative Dentistry.

T. L. BUCKINGHAM, *Dean*,
1206 Vine Street.

PRELIMINARY LECTURES AND INSTRUCTIONS.

The Dispensary and Laboratory of the College will be opened on the 1st of September, and during October preliminary lectures will be delivered. In this month, as well as through the entire session, a clinical lecture will be given, and operations performed by one of the professors, every Saturday afternoon.

THE REGULAR SESSION

Will commence on the first Monday in November, and continue until the 1st of March ensuing. The course is so arranged that about eighteen lectures will be delivered each week on the various branches taught in the College.

CLINICAL INSTRUCTION.

With the exception of Saturday, four hours are daily spent by the student in actual practice, under the supervision of the Demonstrators of the Operative and Mechanical Department.

A SURGICAL CLINIC,

For the treatment of diseases and injuries of the jaws, and for general surgery, is held by Prof. Mears, at 11 o'clock, throughout the year. Prof. M. will also give a clinical course of Lectures on Ovarian Diseases.

FEES.

Matriculation fee (paid but once)	$5
For each Course (Demonstrators' ticket included)	100
Diploma	30

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PHILADELPHIA DENTAL COLLEGE.

(N. W. COR. TENTH AND ARCH STREETS.)

The Faculty consists of five, who are assisted in the operative and mechanical departments by three demonstrators and assistants. Each of the former delivers three lectures a week, and occupies a portion of every Saturday in clinical operations.

The hours from 9 to 11 A.M. and from 2 to 4 P.M. are occupied with the mechanical and operative departments, under the care of the demonstrators.

FACULTY.

J. H. McQUILLEN, M.D., D.D.S., Professor of Physiology.
HARRISON ALLEN, M.D., Professor of Anatomy and Surgery.
D. D. SMITH, D.D.S., Professor of Mechanical Dentistry and Metallurgy.
S. B. HOWELL, M.D., Professor of Chemistry and Materia Medica.
THOMAS C. STELLWAGEN, M.D., D.D.S., Professor of Operative Dentistry and Dental Pathology.

WM. C. HEAD, D.D.S., } Demonstrators of Operative
CHAS. E. PIKE, D.D.S., } Dentistry.
CHAS. J. ESSIG, Demonstrator of Mechanical Dentistry.

CLINICAL INSTRUCTORS.

J. FOSTER FLAGG, D.D.S., *Philadelphia.*
C. A. KINGSBURY, M.D., D.D.S., "
GEO. W. ELLIS, M.D., D.D.S., "
LOUIS JACK, D.D.S., "
FRANKLIN M. DIXON, D.D.S., "
JAMES McMANUS, D.D.S., *Hartford.*

FEES.

Matriculation (paid but once)	$5
Tickets for the Course (including the Demonstrators')	100
Diploma	30

J. H. McQUILLEN, M.D.,
Dean of the Faculty,
S. W. cor. 21st and Arch Sts., Philadelphia.

SPECIAL COURSES OF LECTURES.

PHILADELPHIA SCHOOL OF ANATOMY.

(CHANT STREET, TENTH STREET, ABOVE CHESTNUT.)

COURSES OF LECTURES ON PRACTICAL SUBJECTS.

The following Courses of Lectures will be delivered in this institution during the *Summer Session* of 1871:

I. Anatomy	DR. W. W. KEEN.
II. Operative Surgery	DR. W. W. KEEN.
III. Bandaging, Fractures, and Fracture Dressings	DR. O. H. ALLIS, 1005 Walnut St.
IV. Auscultation and Percussion,	DR. O. P. REX.

The SUMMER COURSE OF LECTURES on *Anatomy* will begin on Tuesday, April 5, 1871, at 8 A.M., and will continue until October 6, 1871, with a recess during July and August.

A systematic course of Lectures on *Descriptive and Surgical Anatomy* will be delivered on Wednesdays, Fridays, and Saturdays, at 8 A.M., illustrated by dissections, models, drawings, etc. The microscopic anatomy of the various tissues will be shown by the class microscope. Dissection will be carried on under the direct and personal supervision of the Assistant Demonstrators of Anatomy.

The Course on *Operative Surgery*, by Dr. W. W. KEEN, will begin on Wednesday, April 12, 1871, at 9 A.M.

Special arrangements may be made for private courses by candidates for the Army or the Navy, or by others.

The Course on *Bandaging, Fractures, and Fracture Dressings*, by Dr. O. H. ALLIS, will begin on Wednesday, April 12, 1871, at 9 A.M.

The Course on *Auscultation and Percussion* will be delivered by Dr. O. P. REX, with especial reference to diseases of the chest, beginning on Wednesday, April 12, 1871, at 9 A.M.

Fee for each Course, $10.

For further information, apply to the Janitor, at the rooms, or to

W. W. KEEN, M.D.,
1619 *Chestnut St.* (3½–5 P.M.)

PRACTICAL MEDICINE.

Drs. WILLIAM PEPPER and H. C. WOOD, JR., will take a limited number of private students for practical bedside instruction in the medical wards of the Philadelphia Hospital. The Course will extend during April, May, and June, and will include thorough instruction in Physical Diagnosis, and the application of Electricity to the diagnosis and treatment of disease.

Drs. PEPPER and WOOD have under their care about one hundred and twenty-five patients, thus affording abundant material for bedside instruction.

The class will be met by Dr. PEPPER on Tuesday at 8 A.M., and by Dr. WOOD on Friday at 9½ A.M.

Fee for the Course, $20.

Apply to
DR. WILLIAM PEPPER,
Univ. of Penna., or 1215 *Walnut St.*
DR. H. C. WOOD, JR.,
144 *N. Twelfth St.*

AUSCULTATION AND PERCUSSION.

Dr. HUTCHINSON will begin a Course on the Methods of Physical Diagnosis, early in April, at the class-room of the Medical Institute, 920 Chestnut Street. Instruction will be given at a special Dispensary for Diseases of the Chest. Fee for the Course, $15.

For further information, apply to
J. H. HUTCHINSON, M.D.,
1616 *Chestnut St.*

PHYSICAL DIAGNOSIS.

Dr. HERBERT NORRIS will deliver a Course of Bedside Clinical Instruction on Physical Diagnosis, in the wards of the Episcopal Hospital, during the months of April, May, and June. Fee for the Course, $10.

THE MICROSCOPE IN PHYSIOLOGY AND MEDICINE.

Dr. TYSON will deliver his Eleventh Course of Lectures, at the Philadelphia Hospital, during April, May, and June. The Lectures will be complemental to his Course on Microscopy and Urinary Chemistry at the University of Pennsylvania, and will include the physiology and pathology of the blood, the histology of important healthy and diseased tissues, with the theories of their development and special methods of demonstration and preservation. The Lectures will be illustrated by appropriate microscopical preparations, and there will be opportunity for laboratory practice with the microscope. This Course is open to all, free of charge.

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URINARY CHEMISTRY.

A Course of Lectures and practical demonstrations on the Urine will be given by Dr. L. J. DEAL, 1103 Vine Street. Fee for the Course, $10.

Dr. H. B. HARE will deliver a Course of Lectures on Practical Chemistry, with demonstrations in the laboratory of all the chemical operations requisite for medical students and practitioners, during the months of April, May, and June. Fee for the Course, $15.

DISEASES OF THE EYE.

OPHTHALMOSCOPIC COURSE.

By WM. F. NORRIS, M.D., and GEO. STRAWBRIDGE, M.D., commencing April 15, 1871.

Each pupil will have abundant opportunity of examining all cases presented.

The Course to continue during six weeks—three practical and two theoretical lectures being given in each week. Fee for the Course, $10.

OPHTHALMIC SURGERY.

A Course of Lectures upon the Eye will be given at the class-room of the Medical Institute, 920 Chestnut Street, during April, May, and June. Fee, $10.

GEORGE C. HARLAN,
Surgeon to Wills Ophthalmic Hospital,
1806 *Chestnut St.*

PHILADELPHIA EYE AND EAR INFIRMARY.

Clinical instruction in diseases of the Eye and Ear, by Drs. P. D. KEYSER and JAMES COLLINS.

Two courses of instruction will be given yearly hereafter in this institution, consisting of a Winter Course, beginning in October and continuing during November, December, January, and February; and a Summer Course, beginning in March and continuing during April, May, June, and September.

Daily Clinics from 12 to 2 P.M.

The first Summer Course will begin the second week in March, 1871.

LARYNGOSCOPY AND RHINOSCOPY.

Dr. BERTOLET will commence a Course on the above subjects, on April 3, at the Medical Institute, 920 Chestnut Street. Practical instruction in the use of the Laryngoscope in the examination of patients.

Fee for the Course, $10.

For further information, apply to

R. M. BERTOLET, M.D.,
107 *South Thirteenth St.*

MEDICAL EXAMINATIONS.

The following Private Associations will give regular medical examinations in connection with the authorized text-books, and special courses of lectures.

In connection with the University of Pennsylvania:

Drs. BOLLING, H. LENOX HODGE, HUTCHINSON, HARLAN, CHESTON, J. MINIS HAYS, and BERTOLET, will give Lectures and Examinations daily during April, May, June, and September.

The following special courses of Lectures will be given by members of the Association: Regional Anatomy, by Dr. HODGE; Percussion and Auscultation, by Dr. HUTCHINSON; Diseases of Eye and Ear, by Dr. HARLAN; Laryngoscopy and Rhinoscopy, by Dr. BERTOLET.

Fee for the whole course, $50; or any part may be taken separately.

Drs. G. PEPPER, HARRISON ALLEN, WILLIAM PEPPER, JAMES TYSON, and H. C. WOOD will give regular Examinations during April, May, June, and September.

The following *Special Bedside Clinical Instruction*, in the wards of the Philadelphia Hospital, will be given by members of the Association: Clinical Medicine, by Dr. WILLIAM PEPPER and H. C. WOOD; Diseases of Women, by Dr. GEORGE PEPPER; Clinical Surgery, by Dr. H. ALLEN.

A course of Lectures on Microscopy, General and Morbid Anatomy, will be given by Dr. JAMES TYSON; and one on Surgical Anatomy, by Dr. HARRISON ALLEN.

Fee for the Examinations $30
Fee for each Clinical Ticket 10

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In connection with the Jefferson Medical College:

Drs. ANDREWS, GROSS, MAURY, and TOWNSEND will give regular examinations in connection with the authorized text-books, during the months of April, May, June, and September.

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Fee for the Course $20

Drs. KEEN, HUTCHINS, ALLIS, REX, and LEFFMAN will hold regular examinations during the Spring months.

ARMY AND NAVY MEDICAL SERVICE.

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Candidates for promotion will be afforded opportunities for review, and for practical instruction in Operative Surgery, Bandaging, etc.

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to point to the great extent and completeness of the arrangements which have been perfected here for that purpose. The activity and liberal policy of the schools have been infectious: many of the best among the men rising into eminence have been secured to fill the clinical positions created; but there are many others who, in honorable emulation, have instituted special courses of extra-mural instruction. The staffs of the hospitals have cordially seconded these efforts, and provide abundant clinical instruction throughout the year in practical medicine, surgery, and midwifery. Various ward-classes are also formed during the year in the largest hospitals of the city, for the purpose of bedside practical instruction.

The result of all this activity may be readily conceived. It has led to this, in brief, that there is no form of clinical opportunity or of special instruction, that the student or practitioner may desire, which is not readily accessible. The day has already arrived when it is of questionable advantage for an American student to leave his Alma Mater for London, Paris, Vienna, or Berlin. The teachers whose instructions he can here secure may not yet have earned a world-wide reputation, but they are men fitted for their special work by careful study and large experience, and who, with ample clinical material at their disposal for illustration and demonstration, will impart a thorough practical knowledge of their subject. Add to this, that, owing to the liberality of the schools, these extensive clinical facilities are offered the student entirely without extra charge, so that the cost of a residence in the city is the only price to be paid for their enjoyment. We cannot too emphatically repeat our belief that it is preferable, in many ways, for those who have graduated, and are anxious to acquire more thorough clinical knowledge, or to devote themselves to the study of any specialty, that they should remain in America and take advantage of the ample facilities afforded at our large medical schools. Such have been the progress and development of medical teaching in Philadelphia during the past few years, and such is at present the creditable position it has attained. Each year will show, we venture to predict, that the profession throughout the country appreciate the exertions which have been made, both by the regular Faculties and the extra-mural teachers, to provide for the medical student every facility he can possibly desire. These greatly increased opportunities have, however, one risk and danger attached to them. It is not enough merely to arrange numerous and varied courses of instruction, no matter how wisely the subjects may be chosen, nor how able and clear the teaching. There must also be some advances made on the part of the student as well. Even before the addition of the clinical courses to the winter curriculum, the student who faithfully attended all the didactic lectures, and dissected in the evenings, was overworked. And now that one or two lectures daily have been added to his task, it requires great endurance to accomplish it. There can be no doubt as to the fact that the students who have attended all the didactic and clinical lectures at either school during the past winter have heard too much teaching,—more than their brains could possibly retain and digest. Not that this is an argument against the additional clinical instruction: far from it. The courses are all optional, and no more is required of the candidate for graduation than formerly. The simple truth is, that the time spent by the medical student in America in obtaining a diploma is about one-half as long as is desirable. In other countries, where governmental restrictions compel attendance upon medical instruction for four, five, or even seven years before graduation, the curriculum can be so arranged as to include thorough instruction in all important branches without too much tasking the student at any one time. But in America medical education labors under these two great disadvantages, which are destined to clog its progress for a long time to come. It seems impossible, at present, to establish preliminary examinations, so as to insure a certain degree of preparation and fitness on the part of the student, and it is equally impracticable to extend the duration of the studies absolutely demanded as qualifying for graduation. It is necessary to leave the door open for those who choose to graduate after attending only two full courses of didactic lectures; and we regret to say that the number is very large. But none the less is it desirable to extend to those who are willing to choose a wiser course, and to pursue more deliberately their professional studies, every opportunity for acquiring as high and complete an education as can be obtained in any medical centre of the world. Let our aim, if it be impossible to exact a sufficiently long course of study, be to make the advantages of the higher sort of medical education so apparent, that gradually students will of themselves recognize that it will be to their interest to give the time necessary to acquire it. Let each practitioner who is consulted as to the best course for one who intends to study medicine, urge the importance of giving four or five years to the undertaking. Let him advise the inquirer not to endeavor to master all branches of medical science at the same time, but to be contented with a wise selection for the first year, and to patiently pursue his studies until he has acquired not only the information necessary to pass his examination, but a sound practical knowledge of general clinical medicine and surgery and of some of the more important specialties. To put it on the lowest ground,—that of expediency,—we firmly believe that the student who has spent four or five years—winter and spring alike—in gaining practical knowledge and skill, while at the same time studying for his degree, will, in the course of ten years after graduation, attain a position and be in receipt of an income far in advance of his fellows who at first seemed to distance him by hastening through their studies in two years. Every student who follows the course we advise will become a powerful and active argument in favor of a higher medical education, and will hasten the approach of the day when an elevated professional sentiment will condemn the crude and imperfect acquirements which now qualify for graduation. We feel, therefore, that the present condition of medical teaching in Philadelphia is a most hopeful and encour-

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aging one. It indicates the earnest desire—which circumstances alone prevent from being declared the fixed law—that all who pursue their medical studies in this city may acquire a complete scientific and practical education, which will still entitle the graduates of the medical schools of Philadelphia to receive the recognition of their full scientific equality with those of any other school in the world.

JOURNALISTIC DEBTS.

IN publishing, as we did at page 143, in the number of THE MEDICAL TIMES for January 16, a translation of the discussion between Dr. Hartsen and Prof. Virchow, on the "propriety of the marriages of consumptives," which has lately appeared in Virchow's *Archives*, we felt that we were doing a good service in bringing before the profession the opinions of so eminent a pathologist as Virchow on such an important question. We were led to believe that we had not been mistaken, by the expressions of interest of some of our most valued subscribers. But the most assuring proof was afforded us by finding in *The British Medical Journal*, for February 4, our entire translation copied verbatim et literatim. No! we are mistaken. We had carelessly allowed the erratum "*sequal*," for "*sexual*," to pass us uncorrected in the proof, and we are glad to see that the proof-reader of our cotemporary has detected our inaccuracy. What especially attracted our attention, however, was the fact that our translation appears as the chief leading article in that issue of *The British Medical Journal*, and that, too, without either a word of acknowledgment to us, or even the statement that the article is a literal translation at all. There should never be any hesitation in borrowing whatever we want from such a friendly source as the pages of any cotemporary journal, but it is well, in doing so, to remember to sign an I. O. U. for the value received.

THE ALUMNI ASSOCIATIONS OF OUR MEDICAL SCHOOLS.

IN every State and Territory of our wide-spread country, and in every county and important town of the more populous districts, the graduates of the University of Pennsylvania and the Jefferson Medical College vie with each other in honorable rivalry in the great cause whose principles were instilled into their minds during attendance on the instruction imparted in this city. If we casually glance over the long columns of names published in the general lists of graduates of these two schools, we are involuntarily led to reflect how little effort has been made, until recently, by either to bring under the shadow of its wings this immense scattered mass of professional labor, vigor, skill, and research. Something was needed, long before the inauguration of these new alumni associations, to make every graduate sensibly appreciative of the fact that he was not forgotten, and that he never could be so far removed from his Alma Mater that her extended arms could not reach him with her protecting good influences and conscientious moral support. It had for some time been in contemplation by our local representative medical men, of each school, to found societies for this and kindred objects; but active measures were not taken for this purpose until the spring of 1870.

The "Society of the Alumni of the Medical Department of the University of Pennsylvania" was organized March 11 of that year, at a meeting of its graduates in medicine, held by invitation of the graduating class,—a constitution being adopted and the following officers elected:

President, Dr. George B. Wood; Vice-Presidents, Drs. Joseph Carson, Edward Hartshorne, S. H. Dickson, and Caspar Morris; Treasurer, Dr. Robert E. Rogers; Corresponding Secretary, Dr. James Tyson; Recording Secretary, Dr. George P. Oliver.

The "Alumni Association of the Jefferson Medical College of Philadelphia" was founded on the 10th day of March, 1870, and at a subsequent meeting the following organization was effected:

President, Dr. Samuel D. Gross; Vice-Presidents, Drs. Nathan L. Hatfield, Washington L. Atlee, Ellwood Wilson, and Addinell Hewson; Treasurer, Dr. B. Howard Rand; Recording Secretary, Dr. J. Ewing Mears; Corresponding Secretary, Dr. Richard J. Dunglison.

There is so little difference in the objects of these two societies or associations, both engaged in the furtherance of the cause of medical progress and honorable professional practice, that we need only sum up collectively the avowed purposes of both to be the promotion of the prosperity, interests, and influence of their Alma Mater, and of sentiments of general brotherhood and amity among the graduates, the offering of prizes, the publishing of meritorious theses, the endowment of scholarships for the free medical education of the sons of alumni whose means are limited, the collection of anatomical and pathological specimens for the museum, and, above all, the advancement of the interests of medical education and the diffusion of sound medical knowledge. It is to be hoped that the alumni everywhere will enter into these objects with as much zeal and earnestness as some of those who are directly on the spot, on whose efforts the success of these associations so greatly depends.

The establishment of these medical brotherhoods must inevitably lead to several happy results. No graduate of either school who is tainted with the least suspicion of quackery will be received into association with his fellow-graduates; and the knowledge of his evil ways will not be confined to the locality in which his deception is practised, as it now becomes the solemn duty of every alumnus to report all such cases to the alumni association for its action. Men who have, possibly, never taken a degree at any school, nor followed a course of study, will feel less secure in appending M.D. to their names, or in claiming that the commendatory letters they publish with their ad-

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vertisements are genuine emanations from the professors of high-toned medical institutions. Hardly a year passes without at least a score of letters being received by the deans of the two schools desiring information as to the fact of graduation of some unblushing quack or patent-medicine vender.

By the interest thus reawakened in their Alma Mater, the graduates of the University of Pennsylvania and the Jefferson Medical College will doubtless insure increased prosperity to each, and keep Philadelphia still foremost in the ranks of thorough, earnest, and vigorous instruction. But this would be a purely selfish view of the case, were it not that by the decided stand they take in defence of their Alma Mater they guard the cause of rational and regular practice from the inroads of quackery, and protect the community against fraud and deception. Let every graduate reflect upon this matter, and speedily realize that for a very trifling sum he may become a member, or even a life-member, of either of these valuable associations, and be himself the active advocate and guardian of the principles on which they are founded.

TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held January 25, 1871, Wednesday, 8 P.M., Vice-President A. H. Fish in the chair.

After the reading of the paper on Tobacco by Dr. J. C. Morris, for which see page 211 of this number of the journal, the following remarks were made:

DR. ANDREWS asked what might be called a moderate use of the cigar.

DR. MORRIS replied, That which is sufficient to lower the pulse, to produce a calming influence on the mind, and a comfortable stool. Probably from one to three cigars.

DR. HALL mentioned the case of a dockyard laborer in England, who ate tobacco and made his meals on it, without any injurious effect. He thought that probably the outdoor labor would account for the immunity from injurious effect.

DR. ASHHURST referred to the case of a man in West Chester, who has been a chewer all his life, and has been in the habit of swallowing his saliva. His digestion is not disturbed, and he has no constitutional disturbance whatever. He thought that the principal effect was upon the optic nerve. The smoker always delighted in the light filmy cloud. He thought the average of seven and a half pounds per annum for every man, woman, and child in the United States too large.

DR. MORRIS admitted there was something in the "filmy cloud," but that there was more than that. Smoking does tend to produce amaurosis.

DR. HAMILTON remarked that the general tenor of the paper just read, and the experience of the lecturer, in regard to the medical and popular use of tobacco, accorded well with the views of the profession at large. In the practice of most physicians, tobacco is wellnigh a proscribed article; originating, doubtless, in the difficulty of determining the precise conditions to which it is applicable, and the fear of ill consequences ensuing from its irregular or violent action. The late Prof. Chapman used to declare in his lectures that in the narcotic power of this plant was to be sought the charm through whose influence the use of it had spread over the civilized and savage world. In view of the manifestly injurious operation of every narcotic upon the healthy organism, and especially when such agent, as in the case before us, is in its very nature seductive and leads to excess, may we not be permitted to doubt that "in its widely-extended use a redeeming feature may be found"? A diminished sensibility of the nervous system, and, as a sequence, decreased activity of the functions of organic life, under the influence of tobacco, may perhaps account for the fact that fatigue and hunger are borne more readily by its use. Tobacco, when freely used, is to be regarded simply as an injurious indulgence; its excessive use is positively baneful, as evinced in the violent perturbations caused by it in body and mind. But the use of tobacco, it is said, has in some instances answered as a substitute, or suppressed the desire for, vinous and spirituous potions. Such cases are merely exceptional. It is a matter of observation that smoking creates a thirst,—and, very generally, these two habits are found together. It is the duty of the profession to caution those who use this narcotic, in the hope that their voice may be listened to when all other admonition fails.

DR. WITTIG confessed to being an old smoker, and smokes less now than formerly. He learned the disagreeable habit by imitation, and had derived no benefit from it. Nicotine is a stimulant, like alcohol. He could not use alcohol with it in his own person. It increases the elimination from the skin, kidneys, and bowels, and stimulates the vascular system generally. It caused sleeplessness and vertigo, owing to the emptiness of the cerebral vessels, and impaired digestion. It was the violation of habit, simply, that caused the soldier to feel its need. One of his teachers used it in pertussis. It acted by throwing out the morbific matter, but produces prostration in children. In hernia it has been superseded by chloroform.

DR. COHEN remarked that he was a smoker. A single cigar increases his pulse ten or fifteen beats. Smoking keeps him wakeful, and though it often produces nervousness, still, occasionally, a thought seems to be worked out all the better for it. He looks upon the use of tobacco as upon the use of tea, coffee, cocoa, the betel-nut, etc., and alluded to cases of hypochondriasis resulting from excessive tea- and coffee-drinking. He mentioned the fact that although the use of alcohol had been prohibited in the U. S. Navy, no restriction had been placed upon the use of tobacco. He believed that tobacco was sometimes useful as a repressant in a fast age. With reference to its effects on the throat, he had seen as bad and obstinate cases of pharyngitis in non-smokers as in smokers. With regard to the cases mentioned where patients affirmed that they felt benefit from smoking, he presumed that sudden cessation of its use when it had become habitual, might alter nutrition in such a way as to produce a feeling of discomfort.

DR. BUCK said that it reduced obesity in his own case. He had seen it used in earache in the form of smoke; and as a poultice applied over the stomach, he had known it to act as a laxative.

DR. STETLER said the lecturer had pointed out few merits, but many demerits. The less we can say in its favor as a medicinal agent, the greater the excuse, perhaps, for its habitual use. If it is a good medicine, there is no more reason or excuse for its constant use than there would be for the habitual use of opium because it relieves pain. Tobacco merely retards retrograde metamorphosis, and is doubtless capable of doing good in cases of deprivation of food, but he doubted whether it could be classified as "accessory food." He had often seen its use associated with the abuse of alcohol, on the principle that one bad habit begets another. The late Prof. Pepper said he had seen worse effects from tobacco than from alcohol. Experience had satisfied him that this was the case.

DR. FISH has been a moderate smoker for many years. The effect of tobacco in his own person is that of a decided arterial and nervous sedative, reducing his pulse five or six beats in a minute. He has never experienced any ill effects from its use. The force of habit is well seen in the symptoms that are produced in the novitiate, and in the immunity of the adept. He is familiar with a case where tobacco has been chewed for fifteen years and the saliva swallowed; there is no impairment of health. He had seen it applied, in the form of Scotch snuff, in a poultice upon the chest of an infant fifteen months of age, suffering with catarrh. He found this little patient, at his

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morning visit, bathed in profuse perspiration; with frequent, feeble pulse, respiration greatly accelerated, and features pallid and pinched—in a word, the child was in a condition bordering on fatal collapse. It was relieved by the removal of the poultice, which a meddlesome nurse had applied.

DR. MORRIS remarked that endurance was greater under its use, as sensibility was obtunded. That it is very slightly narcotic is seen in the fact that it makes one wakeful and is used by those keeping watch. It is diuretic and cholagogue. He had used it in parturition, in form of cigar.

At a conversational meeting, held February 8, Wednesday, 8 P.M., Dr. J. Aitken Meigs, President, in the chair,

DR. GROVE exhibited a calculus which he had removed from the bladder of a male child, three years old, on the 19th day of January, by the lateral perineal operation, assisted by Drs. A. D. Hall and L. S. Booles. The stone measured 1⅛ inch by ⅞ inch. He passed urine on the second day freely by the urethra. Urine ceased to pass through the incision on the fourth day. On the fifth day the patient had a profuse eruption of varicella, which, however, did not retard the healing of the wound. On the fourteenth day the wound had completely cicatrized, and on the sixteenth day he was going about the house as usual, and is now restored to perfect health.

DR. WELCH presented some statistics on relapsing fever in the Municipal Hospital. The first patient was admitted April 30, 1870; the last, November 5, 1870. The whole number admitted was 517,—whites, 257, blacks, 260; males, 252, females, 265; the oldest 91 years, the youngest 2 years. Admissions were as follows: April, 1; May, 174; June, 199; July, 92; August, 16; September, 25; October, 9; November, 1. The total number of deaths was 80, of which there were 12 whites and 68 blacks. The mean per cent. of deaths was 15½. There was 5 per cent. of deaths among the whites, and 26 per cent. among the blacks.

DR. HINKLE had treated lately several cases of erysipelas with the iodide of potassium in five-grain doses every three hours. There were three cases attacking the face and head, lasting on the average three days. The fourth case was of the arm, and of a phlegmonous character, lasting perhaps a day or two longer. One of the cases he had treated previously with tincture of chloride of iron; the others were first attacks. He had no faith in external applications.

DR. GOODELL remarked that, excepting the phlegmonous variety, he had very little faith in either the internal or external treatment of erysipelas. He had tried all the well-known remedies, but had never yet succeeded either in confining the spreading patch of inflammation, or in arresting the course of the disease; that his experience tallied with that of M. Louis, who stated that all his cases of facial erysipelas got well, with or without treatment. Indeed, he had never seen a fatal case in adults, although, on the other hand, he had never seen a newly-born infant recover from such an attack. In his opinion, the cases reported by Dr. Hinkle constituted varieties of the so-called *chronic* form of this disease, which was rather a cutaneous than a constitutional disorder. In such cases the iodide of potassium would undoubtedly prove of equal service as in other dermoid affections.

DR. STETLER stated that he thought the term "chronic erysipelas" an erroneous one, and asked Prof. H. H. Smith if he had not so learned his opinions from his lectures.

PROF. SMITH replied that, as he had just entered the hall, he was not fully acquainted with the course of the debate, but he would state that in his opinion there was no such disease as "*chronic* erysipelas." Erysipelas was a strictly *acute* disorder, characterized as one of the exanthemata, preceded by general symptoms of depression, then gastric disorder, fever, and an eruption accompanied with sharp, burning heat, serous effusion beneath the cuticle, etc., which gradually dried up, the disorder disappearing from the fifth or sixth day to the fifteenth or twenty-first day. There is always febrile disturbance, and the average period of resolution is the seventh day. Whether excited in its local development by wounds or other irritation of the skin, the treatment consists in eliminating the noxious element from the blood, and in improving the red corpuscles by the administration of iron and good food. Local treatment he thought was of no value in arresting the progress of the eruption, but materially added to the comfort of the patient. Dr. Smith also spoke of the influence of atmospheric changes upon wounds, etc., and the advantage of protecting all surfaces in an epidemic erysipelas. The disorder so often spoken of as "chronic erysipelas," and alluded to by Dr. Stetler, was generally, he thought, a form of "*acne rosacea*" when seen about the face and nose, and "chronic eczema rubrum" as seen on the legs, especially after ulcers or varicose veins; these conditions being unattended by fever or the other marked constitutional disturbance seen in erysipelas.

DR. BUCK spoke of the success he had had in the use of the bisulphite of soda, both internally and externally. His success is uniform. The treatment had been suggested to him first by a paper read before the society several years ago by Dr. Nebinger.

ABSTRACT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a meeting of the Pathological Society, held Thursday, February 9, 1871, John Ashhurst, Jr., M.D., in the chair, DR. HORACE B. HARE exhibited the specimens from a case of *cancer of the liver, stomach, and pancreas*. The patient was a stone-cutter, aged 45, admitted to the Episcopal Hospital, January 14, 1871. He observed some abdominal enlargement in September, 1870, but was not inconvenienced by it. About the middle of October the enlargement became noticeable to others, and early in November vomiting after meals, of half-digested food, supervened. This, however, ceased. About the middle of November he first noted a yellowish coloration of the face. He had no pain, except a short paroxysm under the right scapula, two weeks before admission. His bowels were regular, appetite good, but emaciation progressive.

At admission, the legs were œdematous and bore the scars of an old eruption, possibly syphilitic. There were slight deafness and impairment of memory. Vomiting was again temporarily present. Physical examination revealed the thoracic viscera normal, but inspection in dorsal decubitus revealed an unusual prominence of epigastrium and both hypochondria. Dulness was absolute in the median line, from the upper border of fifth rib to ¾ inch above the umbilicus, and transversely from a point 5¼ inches below and 1¼ inches outside of the left nipple across the abdomen, and nearly to the spine,—well defined in its upper border, irregular in its lower. Palpation showed, correspondingly, a solid mass, with well-defined lower border, descending with each inspiration, and appreciably nodular. There was slight tenderness on pressure, no marked prominence of the superficial veins. The urine contained no albumen, no coloring matter or acids of bile, until in the last week, when coloring matter was present; feces normal. He grew gradually worse, and died January 27. As is apparent from the above history, gastric disturbance was slight throughout the course of the disease.

Post-mortem 6½ hours after death. Rigor mortis well marked. Head not examined. Body much emaciated. Face jaundiced. Internal saphenous vein of right leg prominent. *Thorax*, slight fresh adhesions at lower part of both lungs. Aorta and arteries atheromatous; heart flabby; no valvular lesion. *Abdomen* was distended with serum, the liver greatly enlarged, displacing the other viscera. It occupied both the hypochondriac and the epigastric regions, and extended nearly to the umbilicus. There were no adhesions along its superior and anterior faces, but its under and posterior portions were firmly bound to the pancreas, stomach, and intestine. Scattered through it, and appearing at its surface, were irregularly spheroidal masses of whitish or pinkish-white color, varying in size from that of a small cherry to that of a large orange. Protruding from some of these nodules, on the under face of the liver, were other smaller and similar nodules,—the larger soft and easily broken, especially near the centre. The natural color of the liver replaced by the light color of the nodules gave the organ a variegated appearance. The centre of the largest nodule on the superior surface was slightly depressed, and gave an impression of fluctuation on palpation,

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but on section it was found solid. The gall-bladder contained bile: the duct was unobstructed.

The *stomach*, of normal size, contained partly-digested food. It was pressed to the left side, and lay with its greater diameter nearly parallel to the median line of the body. At the pyloric orifice it was thickened and indurated, the pylorus itself being held rigidly patulous by a ring of induration. The pancreas contained several nodules. The right kidney contained two or three small cysts, the largest of which contained a fluidounce of clear yellow fluid, probably urine. The other viscera were not markedly altered.

In reply to DR. S. W. GROSS, Dr. Hare said the mediastinal glands had not been examined, but that the glands about the bronchial tubes were enlarged and indurated.

DR. GROSS alluded to a case of *secondary cancer of the liver* which had come under his observation, in which there had been cancer of the labium, and post-mortem examination revealed a cancerous condition of the inguinal and lumbar glands, and glands of the anterior mediastinum. Also to a second case, in which the liver weighed between eleven and twelve pounds, while the glands were also cancerous.

The specimen was referred to the Committee on Morbid Growth, who reported, February 23, that

"The specimen exhibits at the pyloric end of the stomach a hard ring of well-marked schirrous (fibrous) cancer.

"The liver, which is much enlarged, presents numerous bosses of medullary cancer, some of them as large as the doubled fist. As usual, they are umbilicated, owing to the fatty degeneration and absorption of the cells in the centre of the growth, as well as to the formation and subsequent contraction of fibrillæ of connective tissue. Sections through the cancerous masses showed also interstitial hemorrhages, some recent, others of longer standing. A careful microscopic study of thin sections taken from the boundaries of the cancerous nodules, and from the tissue in the vicinity, shows that the starting-point of the new growth has always been the portal vein and its branches.

"Your committee is also of the opinion that the cancer of the stomach has been the primary seat of disease."

DR. H. ALLEN presented a *deformed humerus after ostitis*, from John Brown, aged 35, who died of diffuse cellulitis of right arm, of a gangrenous type, Feb. 3, 1871. The lungs were in the first stage of pneumonia; the spleen was pultaceous, and measured six by three inches; the liver was large and fatty; the left humerus when opened was congested at area about nutritive foramen; the medulla was of normal consistence; the humerus of the opposite side was opened for comparison, when it was observed to be smaller and of increased thickness. The head was depressed, flattened, and showed evidences of chronic arthritis. The deltoid ridge was unduly prominent; the supra-condyloid ridge very prominent. Upon being opened it was found that the medulla was throughout of the consistency technically known as *medullated*, though unchanged in color.

DR. HUTCHINSON presented a *dermoid cyst of the right ovary*. The ovaries and uterus were removed from the body of an unmarried woman, æt. 25, who died at the Pennsylvania Hospital of acute articular rheumatism, complicated with pericarditis and a commencing degeneration of the muscular structure of the heart and of the kidneys. The os uteri indicate that the woman had never borne children.

The right ovary when first removed was about the size of a small orange, and appeared to be filled with a fluctuating mass, except at one portion, where a hard mass, feeling like bone, could be detected. Upon opening the cyst, some days later, it was found to be filled with a fatty mass, in which were imbedded a number of hairs of a dark color. The hard mass appeared to be composed principally of bony structure, which contained two teeth, apparently a bicuspid and a canine.

Dr. H. said, "It is well known to the members of this society that the occurrence of these dermoid cysts of the ovaries has given rise to much speculation in regard to their origin, and that their presence has been held by many, and among others by Astruc, to indicate the arrested development of an ovum. A more careful examination of the circumstances under which they occur has led, it is believed, to a more correct explanation. Thus, M. Piqué (*Bulletin de la Soc. Anal.*, 1846, t. xxi. p. 200) found that in eighteen cases of the piliferous ovarian cysts collected by him, five were in unmarried females under twelve, six in girls from six months to two years of age, four in female fœtuses arrived at full term, and three in fœtuses aborted at the eighth month. The weight of evidence is said by Dr. A. W. Foot, in vol. xxxvi. p. 225 of the *Dublin Journal of the Medical Sciences*, to incline towards the view that these formations are congenital; that they grow slowly or remain stationary for thirty or forty years; do not attain a large size; are generally solitary and affect but one ovary; are freer from peritoneal inflammatory attacks, and consequently from adhesions and perforations, than other tumors of the ovary. This view of the congenital nature of these tumors is confirmed by the history of similar formations in the masculine gland,—for of eleven cases quoted by Curling, of fœtal remains in the testicle, all were congenital.

"It seems that the fatty matter which so largely composes the contents of the cyst before the society is by no means uncommon, and is believed to be the product of degeneration. At the temperature of the body this fat is fluid, and it has been drawn off in many cases through a canula, congealing when its temperature sank below 85° F. Even hairs have been discharged through a canula, and in one case through the abdominal walls; while teeth and bones from these cysts have occasionally been passed by the anus. In one case M. Plocquet found as many as three hundred teeth in one cyst.

"On the evening of March 22, 1865, I exhibited to the society the two ovaries of a woman, æt. 45; the left was converted into a large sac, and the right ovary into a dermoid cyst which contained fatty matter and a quantity of hair. The ovarian dropsy had existed for twenty years, and tapping had been performed four times. In a report made by Dr. Rhoads upon this specimen, attention was called to the fact that a correspondence in color between the hairs in the cyst and those on the surface of the body had been frequently observed. Such a correspondence existed in the case reported to-night, but did not in the one presented in March, 1865."

DR. C. B. NANCREDE presented for DR. J. ASHHURST, Jr., a specimen of epithelial tumor of the lower lip, removed from a patient æt. 67, admitted to the Episcopal Hospital, Feb. 9, 1871, for the third time for operation. On the two former occasions the disease rapidly returned in the cicatrix, in the first instance within a few days of the departure as cured.

At the time of the present operation by Dr. J. Ashhurst, the greater part of the lower lip was involved, extending to within a short distance of each angle, and downward well towards the chin. According to Lebert and Hannover, the mean duration of this disease in the lower lip is nearly three years and a half; this case had lasted for two years without involving the glands.

DR. J. S. PARRY presented *a cystic right kidney, a granular left kidney, a cancerous uterus*, and a portion of the *right lung*, the seat of *cavities*,—all removed from a patient between 47 and 48 years of age, who was well until fourteen months ago, when she began to suffer pain in the pelvis and loins, and four months later had a frightful uterine hemorrhage attended by syncope. The bleeding recurred not regularly, but often at intervals of three weeks.

In November, 1870, paroxysmal cough, with mucoid and slightly bloody expectoration, supervened, and about January 1, 1871, œdema of the left hand and forearm.

There was a profound cachexia, and over the left anterior superior part of the chest, the veins were dilated and tortuous; the pulse at the left wrist was not quite so strong as the right, while the right carotid was decidedly more forcible. There was no enlargement of the left axillary glands. Resonance was impaired throughout the left thorax, and correspondingly was remote bronchial breathing, less marked, however, superiorly. The area of heart's dulness was increased. The cervix uteri and upper part of vagina were rough and thickened, while the cervix and lower part of the body of the uterus were irregularly indurated. The uterus was fixed in the pelvis, apparently not much enlarged.

The secreting structure of the left kidney was entirely wanting, though the fluid contents of the lobulated cyst into which the organ had been converted were found, on chemical examination by Dr. Hare, to contain organic constituents of urine.

DR. ELLIOTT RICHARDSON presented specimens from a case

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of *depressed fracture of the skull*, followed by convulsions, and for which the bone was trephined two days before death.

John Barlow, æt. 13 years, fell from a tree in August, 1869, to the cobble-stone pavement, a distance of nineteen or twenty feet, striking first his foot, then his knee, and then his head, all on the left side, sustaining a compound depressed fracture of the left temporal and parietal bones. When taken up, he was found to be unconscious. He remained in much this condition for about four weeks, gradually gaining consciousness. He was able, during this time, to see objects that were presented to him, and could signify, by motions, his desire to possess them.

About one week after the accident he had two convulsions, excited, it was said, by the entrance into the room of a woman dressed in black. There was no repetition of these convulsions until two months previous to January 18, 1871, when he was admitted as a patient into the surgical wards of the University of Pennsylvania. Two months after the fall he was able to be up, and even to walk, but was not so intelligent as previous to the accident.

He then attended school, but could make no progress, on account of inability to study and hesitation in speech.

About three months previous to admission, he went to work at coachmaking, but found that the frequent stooping to which he was subjected produced giddiness, flushing of the face, and other unpleasant symptoms. About one month later, he had a return of convulsions while at work, and before getting home that day had three more. These were repeated at irregular intervals up to January 14, 1871. The convulsions generally lasted four or five minutes, and resembled ordinary epileptic fits. He had slight impairment of sight and dulness of hearing following the accident.

He was trephined, January 18, 1871, by Dr. Agnew, and a small fragment of bone was found projecting from the inner table of the portion removed by the trephine, which was supposed, at the time, to include the entire fragment of depressed bone. No relief followed, but symptoms of inflammation of the brain soon set in, and death occurred January 30.

The post-mortem, made a few hours after death, showed extensive inflammation of all the membranes covering the brain, with subarachnoid effusion of pus, covering the entire surface at its base as well as the hemispheres. The substance of the brain was softened an inch in depth under the seat of fracture.

The skull presented on the outside, over the left ear, a depression, not very sharply defined, but about 1½ inches long by 1 inch wide; on the inner surface, two plates of bone of about equal width were depressed at their opposing margins for about ½ inch, but, remaining in position and attached at their distal margins, formed a longitudinal depression like that formed by the two sides of a roof, commencing in the temporal bone directly over the ear, about ½ inch above the petrous portion of that bone, and running upwards and a little backwards 2 inches, to the parietal bone. The entire width of both fragments of depressed bone was 1¾ inches.

Dr. J. Ewing Mears exhibited the *lower third of the right forearm and hand*, which had been amputated by Dr. Washington L. Atlee for the relief of epilepsy occurring in a patient forty-seven years of age. At seven years of age the "aura" appeared in the thumb and index-finger of the right hand, accompanied by involuntary contractions of these members, and gradually passed to the head, terminating in convulsions. Various methods of treatment had been adopted from time to time, without relief, and the patient determined to have the hand amputated, with a view of relieving the condition from which she was suffering, as well as to remove a member which was a source of great annoyance to her, in requiring for its care the constant employment of the left hand.

After amputation, a dissection of the hand was made by Dr. Mears, and the following conditions were observed: The muscles were somewhat atrophied, having undergone, as shown by microscopic examination, partial fatty degeneration. The median and ulnar nerves were very greatly hypertrophied, being about one-third larger than normal, as determined by comparison with healthy specimens. On the second and third digital branches of the median nerve were found two small tumors, each about the size of a coffee-bean. The tumor on the second branch occupied a position opposite the articulation between the first and second phalanges of the thumb; that on the third branch was found opposite the metacarpo-phalangeal articulation of the index-finger.

The radial nerve was normal. A microscopic examination of the nerves was made by Dr. S. Weir Mitchell, who will present his report at a future meeting of the society. The symptoms associated with these conditions will be considered at length in a paper which will appear in the *Medical Times*.

REVIEWS AND BOOK NOTICES.

On Diseases of the Spine and Nerves. By Ch. Bland Radcliffe, M.D., John Netten Radcliffe, J. Warburton Begbie, T. Edmund Anstie, and J. Russell Reynolds. Henry C. Lea, Philadelphia, 1871.

English books which promise enough to draw the attention of an American publisher are variously dealt with, as may seem to be advisable. Historical precedent for certain of these methods is to be found in the records of one of the kindlier of the buccaneers who once infested the Spanish main. "We disturbed no men," says he, "save papist Spaniards, and, having overtook a ship of theirs, if our needs were not great, we but took of what nature required, and bade them go their way. This is not to deny that others, and the more greedy kind, having come upon a tall Spaniard, would go upon her with their own crews and captain, and, with some change of paint, let aloft our own flag, and so sail the seas, not much ill using her sailors when they kept on to do of their work as the captors willed."

Times change, but not morals. The volume before us represents that milder but exasperating form of literary buccaneering which takes only a part; and with thankful heart we observe no American editor's name at the tail of the five authors whose essays have been taken bodily out of "Reynolds' System of Medicine."

The literary impropriety of publishing these essays apart from their parent volume will be plain to any one who, carefully reading, perceives that they by no means represent all spinal diseases, some of which, such as locomotor ataxia, Reynolds has chosen to place under the head of general nervous maladies, where they have escaped the search of the compiler.

Apart from this, very many of the essays do not deserve reprint, and this is true of most of the group of spinal palsies. On the other hand, epidemic cerebro-spinal meningitis, which is a fever essentially with spinal and cerebral symptoms, is treated at needless length, but is hardly more to be regarded as a spinal disease than typhoid fever. The chapter on neuralgia is able, but that on neuritis is hardly worth a place in a "System;" while throughout the volume the therapeutics of all of the subjects are dealt with in a meagre and unsatisfactory way.

We shall have no trouble in recognizing in the last half of the worthy buccaneer's confession the modern American process of "editing." The mode in which the present volume was obtained is as well described in the first few lines of the passage given. No less vicious is the practice of cutting out an English title-page and replacing it with that of the importer of the book; and these are the three literary atrocities under which, just now, English books may suffer.

The object of editing is usually to tack on to the book some name which, because its owner is a teacher, will enable him to call it, in the college book lists, Snooks' Brown on the Liver, or the like,—which is presumed, and we suppose correctly, to commend it to the student. Not many folk take the pains to see how many and what weight of foot-notes are added as bobs to the kite, and the editor, having read proof and put himself on the book, much as the stone-mason does on a great man's tombstone, is advertised throughout the land, and when, in good process of time, he comes to die, is heard of in his obituary at the College of Physicians, as having edited Brown, etc., with "copious notes,"—foot-notes, that is, the editor having walked over his author's omissions severely in this wise, reminding the medical public that "in the last number of the *American Journal of the Medical Sciences* we find the following in regard to the color of the bile, etc.,

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which Mr. Brown seems to have overlooked," and so on. Will some one who has collected editions tell us who first in this country edited an English book, and who, also, medically invented the foot-note as a means towards literary fame? Let us add that there are books which have been edited here, and ably edited, with the full authorization of the writer. With these, when there is a real need of an editor, we have no fault to find.

The book (!) before us has no index, although stated in the table of contents to possess one. It is said "to present the latest advances in the knowledge of the subjects therein discussed,"—a statement about as incorrect as it can well be. Publishers have yet to learn that not all English books are worth plundering. As to the printing and appearance of the present "acquisition," the less said the better.

CIRCULAR NO. 4, WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE, WASHINGTON, December 5, 1870. Report on Barracks and Hospitals, with Descriptions of Military Posts. 4to, pp. 494.

Perhaps no more satisfactory method of obtaining statistical and topographical knowledge of certain regions of our country could be devised than that systematically organized by the Surgeon-General in the order issued August 25, 1868, for the preparation, by the senior medical officer on duty at every post, of "a special report, describing in detail the post buildings, water-supply, drainage, etc.," on the 31st of December of each year; this report embracing all the information contained in the "Record of the Medical History of the Post," kept at each permanent post. The medical officers on whom this duty devolves are by education and observation at least equal in intelligence and capacity to their associates in the line or on the staff, and their views on the hygienic and sanitary condition of the soldier are entitled to much greater weight. The very creditable report, or rather series of reports, now issued, embodies in a volume of nearly five hundred pages the information gleaned from more than a hundred and fifty military posts; and the Department is fortunate in its selection of Assistant-Surgeon John S. Billings as its editor. In addition to the condensation by him of the numerous reports from the near and remote North, South, East, and West, we have presented also a sketch of the general character of the barrack and hospital accommodations of the army, in which defects of construction are pointed out and remedies suggested for improved ventilation and comfort.

The editor seems thoroughly familiar with the delays and difficulties of the circumlocution office in regard to the construction of new hospitals or the amelioration of the defects of old ones, the money obtained by the usual multifarious forms and requisitions being absorbed in repairs of officers' quarters, guard-houses, etc., until little or nothing is left for the more important object of hospital improvement. Circular No. 3, S.G.O., November 23, 1870, has, however, in his estimation, put the whole subject of hospital construction upon a very satisfactory basis (*Medical Times*, January 2, 1871, p. 127).

The hospital system is not organized in peace times in such a way as to be efficient during the existence of a war; and the editor justly remarks that "as troops are drilled in the use of arms though no enemy be present, so should they be familiar with the system which is necessary on the part of the medical department in time of war or epidemics; and to refuse to furnish the necessary accommodations and facilities to medical officers is very much like refusing to allow soldiers to use muskets, cannon, or horses in time of peace." The mortality of the United States Army is higher than among men of the same ages in civil life, and is considered in this report as having been probably increased fifty per cent. by causes that might have been obviated, such as the bad sanitary condition of barracks, a false economy in "the saving in boards and bricks, at the expense of the health and life of the soldier," etc. These are grave matters, imperatively demanding revision and reconstruction, but, except to the minds of the medical officers of the army, are not considered equal in importance or urgency to the great mass of routine demands persistently advocated and advanced in every other department of the military service. The report quotes from the Barrack Commission of England some very apt remarks on this subject, which may be referred to here as applicable to our own country:

"The degree of respect shown medical opinions on matters affecting the health of the troops . . . depends solely on the good sense and capacity of the officer in command, and on the tact and ability of the medical adviser. If the commanding officer be inexperienced and not sufficiently well informed to be conscious of his ignorance in such matters, he does not ask for the opinion of the medical officer, and considers it intrusive if offered. On the other hand, the best and most experienced officers in the service, knowing the value of such advice and assistance, never failed to seek it and to be guided by it, unless, indeed, the estimate which they may have formed of the knowledge and good sense of the medical officer be such as not to inspire confidence in his opinion. . . . The duty and the responsibility of both should be defined by regulation."

ROBERT KNOX, THE ANATOMIST: A Sketch of his Life and Writings. By HENRY LONSDALE. Macmillan & Co., London.

The life of Knox the Scotch anatomist is full of interest. His was the most brilliant and comprehensive mind in the medical ranks of Edinburgh from 1825 to 1862. Of indomitable industry, he contributed valuable papers to anatomy, art, ethnology, zoology, and surgery. Of consummate ability as a lecturer, and gifted with a persuasive address, he commanded at one time the largest private classes known in the annals of anatomical teaching. Yet, with these natural and acquired advantages, Dr. Knox was not successful. He was defeated in all his canvasses, first as candidate for the chair of pathology in 1837, subsequently for the chair of physiology in 1841, and in the same year as lecturer on art anatomy to the Scottish Academy. The cause of his failure is not difficult to discover, when we are made acquainted with his combativeness, his egotism and nonconformity. Besides these unhappy traits, he was unfortunate in being suspected in the popular mind of implication in the Burke and Hare atrocities: his time for justification came, it is true, but too late to be of any service in improving his prospects. His school passed gradually into other hands, and we find our hero struggling against contending odds, now planning great works on anatomy and art, now contributing to the local press; at one time lecturing through the country on ethnology, at another practising obstetrics at Hackney. Yet this man introduced philosophical anatomy into Great Britain, and gave to the nation, through the enthusiasm he excited in his pupils, such men as Owen, the Goodsirs, John Reid, Edward Forbes, and Fergusson!

Dr. Lonsdale, himself of this noble coterie, and at one time the partner of Knox in Surgeon Square, is, in consequence, well fitted to the work he assumes. He has collected material for a first-class biography in his "sketch," in which the dramatic and historic values are about equally divided. Knox was never commonplace. His papers, letters, and lectures are all stamped with his strong individuality; and we cannot but regret that so little of his own contributions to his life appears in the volume before us, owing, as we are informed, to Knox destroying much of his manuscripts a short time before his death. When we say that the book, imperfect as it is, is the most readable medical biography we have ever seen, we are giving it indifferent praise, for the "plain and unvarnished tale" itself is often of a thrilling character. The chapter on the Resurrectionists will compare favorably with the account by Mr. Bransby Cooper. The description of Knox's personal appearance, which Dr. Shelton Mackenzie has pithily given as that of a jockey "with a smart neck-tie and a cutaway coat," is also capital. Dr. Lonsdale is not a little amusing when, in the course of his comments on Knox's favorite theory that Americans are degenerating to a race of hybrids, he depicts, as one of the results of this process, "a black-ebony 'Pompey' and 'Cæsar,' so much alike in white chokers and blue coat and yellow pants, leading two fair-complexioned girls from 'Fifth Avenue,' Philadelphia (*sic*), to the portals, if you will, of miscegenation"!

The book is well printed, and is adorned with two portraits.

BOOKS AND PAMPHLETS RECEIVED.

A Treatise on the Chronic Inflammation and Displacements of the Unimpregnated Uterus. By Wm. H. Byford, A.M., M.D. Second edition, enlarged, with numerous illustrations. 8vo, pp. 241. Philadelphia, Lindsay & Blakiston, 1871.

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The Journal of the Gynæcological Society of Boston. Edited by Winslow Lewis, M.D., H. R. Storer, M.D., and Geo. H. Bixby, M.D. Vol. III., July to January, 1870. 8vo, pp. 400. Boston, James Campbell.

The Change of Life in Health and Disease. A Practical Treatise on the Nervous and Other Affections incidental to Women at the Decline of Life. By Edw. John Tilt, M.D. From the third London edition, 8vo, pp. 292. Philadelphia, Lindsay & Blakiston, 1871.

The Physiological Action of Nitrous Oxide Gas, as shown by Experiments upon Man and the Lower Animals, together with Suggestions as to its Safety, Uses, and Abuses. By J. J. Colton, A.M., M.D. Pamphlet, 8vo, pp. 32. Philadelphia, Samuel S. White, 1871.

Report of the Board of Cattle Commissioners, presented by the General Assembly of Rhode Island, Jan. 27, 1871. Pamphlet, 8vo, pp. 15. Providence, Providence Press Co., 1871.

OBITUARY.

DR. GEORGE THOMSON ELLIOT, prominent as a practitioner, lecturer, and clinical teacher, died in New York, January 29, in the 44th year of his age. He was attacked with apoplexy last summer, and his death hourly expected at that time; but his health improved, and he would probably have lived for some time longer, had he not, against the advice of his friends, returned to New York and made an effort to resume active professional labor. From the *Medical Record* we condense the following facts in regard to his valuable services:

He was, during his student-life, a pupil of Dr. Valentine Mott. He graduated at the University of New York in 1849, and soon afterwards went abroad, where, in Dublin, London, and other parts of Europe, by practical experience as Resident Physician and Interne of various hospitals, and by general observation of cases under treatment in the great medical fields of continental practice, he laid the foundation for his after-usefulness. He occupied numerous honorable positions in New York, where he practised for about seventeen years. He was, at various times, Physician to Bellevue Hospital; Visiting Physician to the New York Lying-in Asylum, to the Nursery and Child's Hospital, Northern Dispensary, and Desmilt Dispensary; Assistant to Prof. Gilman in the College of Physicians and Surgeons; Professor of Obstetrics and Diseases of Women and Children in Bellevue Hospital Medical College; Secretary and Vice-President of the New York Pathological Society, and President of the New York County Medical Society. The immediate cause of his sudden death was the effusion of an immense clot in the ventricles and cord. The *New York Medical Journal* states that but a few hours before his death he was in excellent spirits, and his mental powers never seemed more keen and active; and that he then placed in the hands of a friend a short manuscript on "Bloodletting in Obstetric Practice."

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF HOOPING-COUGH BY CHLORAL.—Dr. F. Waterhouse (*Practitioner*, December, 1870, p. 344) recommends chloral in the second stage of pertussis, when the whoop is developed and the disease uncomplicated. To a child aged four years he gives five grains at bedtime. It must be used with great caution if pneumonic symptoms arise, for it has a tendency to cause lung-congestion.

CHILD WITHOUT ARMS AND LEGS.—Dr. D. M. Pratt (*Buffalo Med. and Surg. Journ.*, November, 1870, p. 158) attended a lady in her fourth labor, who was delivered of a lively female infant without arms or legs. The body was perfectly formed, but on the right side of the pelvis, over the acetabulum, was a fleshy projection, about two inches long, terminating in a perfectly-formed big toe with its nail.

CALCIFICATION OF BRAIN-CELLS BY COMMOTION.—The *Lancet* of November 12, 1870, gives the following translation of a note by Prof. Virchow, from a late number of his *Archives*:

"When, some time ago (1856), I first discovered the occurrence of calcified ganglion-cells in the brain, I was inclined to place it under the head of the 'lime-metastases' I had already described. Since then, however, from the consideration of a large number of cases, I am convinced that another explanation must be given. The process obviously belongs to that series of phenomena that I have recently (1867) described as one of the peculiarities of dead parts still remaining in the interior of the human body. I find foci, especially in the cortex of the brain, in which the cells, with their processes and sometimes also fine nerve-fibres, are calcified, and this extremely frequently after injuries of the bones of the skull. Sometimes at these spots of the brain atrophic depressions occur, the so-called yellow plates, as in the observations I have elsewhere recorded, whilst at others nothing is visible to the naked eye. In the former case, after a peculiar disintegration of the brain in the form of red softening has occurred, the calcified elements are found in the interior of the softened portion, but generally towards the periphery. In the thicker, brown cicatrices, they lie in the adjoining substance of the brain, the cicatrix containing dead brain-cells only. The latter is the most interesting case, as nothing is visible to the naked eye. On several occasions where traces of external injuries, as fissures, were perceptible on the skull, I have investigated the subjacent uninjured portions of the gyri, and have found the ganglion-cells of the cortex calcified. These were, therefore, genuine cases of necrosis by commotion. So far as I can see, no one has followed out these remarkable processes besides myself. Förster, who first described them, made his observations upon the spinal cord; mine were made exclusively upon the brain."

ON THE ORIGIN AND INCREASE OF BACTERIA.—Dr. A. Polotebnow (*Anzeiger der k. k. Akad. der Wiss. in Wien*, April 29, 1869, pp. 87–88, and *Brit. and For. Medico-Chirurg. Rev.*, October, 1870) has been led to the following conclusions:—1. That a perfect genetic connection exists between Bacterium, Vibrio, and Spirillum, and that these organisms present no other differences but those of size and direction. 2. None of the vibriones (Vibrio, Bacterium, and Spirillum) are independent organisms, but only derivations (delicate mycelia) from the spores of fungi, especially those of Penicillium glaucum. 3. The development of the vibriones from the spores of Penicillium may be best followed when the spores are exposed to the action of a high temperature (140° to 212° F.). 4. The notion that vibriones are developed in filaments of mycelium from the granules occurring in the cells proves to be quite erroneous, as also that of the conversion of vibriones into other higher forms (yeast, etc.).

LYMPH OF VACCINIA AND VARIOLA.—Dr. F. Keber (*Journal de Médecine*, and *Brit. and For. Medico-Chirurg. Rev.*, October, 1870) has found in the vaccinal lymph, besides the elements of the epidermis, of pus and blood, special cellular productions, having the following characteristics:—there are granular cells measuring 1–300th to 1–150th of a line, free nuclei of 1–3000th to 1–800th of a line, as well as punctiform molecules. These elements, more or less numerous, are never missing. The cellular elements show, especially by addition of water, an enveloping membrane. Acetic acid makes the membrane transparent, and, on the other hand, makes the granulations more distinct; the latter are from three to twenty in the cells. They must not be confounded with pus corpuscles, and they show different appearances, proving thereby an active cellular process, namely, multiplication by scission. These elements, again, are found in the vaccinal pustules from the fourth or fifth day. Even from the time when the lymph of the vaccinal pustules has been filtrated, one may observe them. Finally, in the dried vaccinal lymph one may point out specially the molecular granulations. These elements should be distinguished from different productions seen in vaccinal lymph, such as crystals, needles, the tufts due to the crystallization of urates, and the vegetations which are found in changed vaccinal lymph. These formations, moreover, exist in the exudations, variolic pustules, and even in the scabs.

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Besides all this, in the pustules of varicella the author has observed analogous if not identical productions.

BILIARY FISTULA.—Dr. G. H. Philipson detailed at the last annual meeting of the British Medical Association (*Brit. Med. Journ.*, September 24, 1870) the case of a woman, aged 34, who had a fistulous opening at the umbilicus, which had existed for ten months. Eight gall-stones, of about the size of small hazel-nuts, had been extracted from the sinus. It was considered that the ductus communis choledochus was still pervious, and that in all probability, in consequence of gall-stones having become impacted in the biliary passage, the gall-bladder had become widely distended, and, from consequent inflammation, adherent to the abdominal wall, which subsequently ulcerated.

ACUTE ATROPHY OF THE LIVER, AND PHOSPHORUS POISONING.—Dr. Bollinger describes (*Centralblatt für die Med. Wiss.*, April, 1869, and *Brit. and For. Med.-Chir. Review*, October, 1870) two cases of phosphorus poisoning, and two others of acute yellow atrophy of the liver, as determined by both macro- and microscopical study, and gives, thereupon, a summary of these diseases, and especially of the opinions hitherto brought forward as to the origin of the so generally concomitant icterus. Contrary to numerous assertions, the author notes the absence of the overgrowth of small cells of the interstitial tissue of the liver. In regard to the icterus, the author declares for himself that it is in both diseases a resorption-icterus, and certainly not, as Virchow has in most cases made it, set up by swelling of the mucous membrane at the outlet of the ductus choledochus, but by parenchymatous inflammatory fatty degeneration of the liver-cells, and throwing off of the fattily-degenerated epithelium of the fine biliary canaliculi. The theory of the hæmatogenous icterus appears very doubtful, as in the liver the effect was always sufficient to demonstrate the origin of the icterus.

MISCELLANY.

AMERICAN MEDICAL ASSOCIATION.—The Twenty-Second Annual Session will be held in San Francisco, Cal., May 2, 1871, at 11 A.M.

The following Committees are expected to report:

On Cultivation of the Cinchona-Tree,—Dr. Lemuel J. Deal, Pa., Chairman. On Inebriate Asylums,—Dr. C. H. Nichols, D.C., Chairman. On Institutions for Inebriates,—Dr. Joseph Parrish, Pa., Chairman. On the Structure of the White Blood-Corpuscles,—Dr. J. G. Richardson, Pa., Chairman. On Vaccination,—Dr. Henry A. Martin, Mass., Chairman. On the Comparative Merits of Syme's and Pirogoff's Operations,—Dr. Geo. A. Otis, U. S. A., Chairman. On Lithotrity,—Dr. E. M. Moore, New York, Chairman. On Veterinary Medicine,—Dr. Samuel D. Gross, Pa., Chairman. On Protest of Naval Surgeons, etc.,—Dr. W. S. W. Ruschenberger, U. S. N., Chairman. On National Medical School,—Dr. Francis Gurney Smith, Pa., Chairman. On American Medical Association Journal,—Dr. James P. White, New York, Chairman. On Criminal Abortion,—Dr. D. A. O'Donnell, Maryland, Chairman. On Nomenclature of Diseases,—Dr. Francis Gurney Smith, Pa., Chairman. On National System of Quarantine,—Dr. J. C. Tucker, California, Chairman. On What, if any, Legislative Means are expedient and advisable, to prevent the Spread of Contagious Diseases,—Dr. M. H. Henry, New York, Chairman. On Renewal of Prescriptions by Apothecaries without Authority,—Dr. R. J. O'Sullivan, New York, Chairman. On American Medical Necrology,—Dr. C. C. Cox, D.C., Chairman. On Medical Education,—Dr. Ely Geddings, South Carolina, Chairman. On Medical Literature,—Dr. P. G. Robinson, Missouri, Chairman. On Prize Essays,—Dr. T. M. Logan, Cal., Chairman. On the Climatology and Epidemics of the Various States of the Union,—a committee composed of one member from each State.

Secretaries of all medical organizations are requested to forward lists of their Delegates, as soon as elected, to the Permanent Secretary.

Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a *member by invitation*, upon the recommendation of the Committee of Arrangements.

W. B. ATKINSON, *Permanent Secretary*,
1400 Pine Street, Philadelphia.

MUNIFICENT DONATIONS.—In our last issue we noticed the gift by Earl Derby of ground for the site of the Stanley Hospital. That the commoners are not behindhand will appear from the following, taken from the *British Medical Journal* of February 4:

"On Tuesday, Mr. Humphry Nicholls, of Manchester, presented to Mr. Robert Gladstone, the Treasurer of St. Mary's Hospital, the sum of £9000, to be applied to the funds of that institution, and an additional sum of £9000 for the Barnes' Convalescent Home at Cheadle-Hulme. These donations, with others previously given, make a total of £20,000 given by Mr. Humphry Nicholls to the above institutions."

A "QUIZZER" IN TROUBLE.—We see that a London "coach" ("quizzer," in Philadelphia parlance) has been held to bail for having "incited a printer in the employ of Messrs. Gilbert & Rivington to steal a proof of one of the papers of questions for a forthcoming examination at the Apothecaries' Hall."

STRICTNESS OF PRUSSIAN EXAMINATIONS.—The *Medical Record* quotes from the *Lancet* the statement that "in the nine universities of Prussia the commissioners examined, for the license to practise, 434 doctors and candidates in medicine. Out of these, 302 were declared fit to practise; so that there were 132 rejections. It should be understood that among the latter there were doctors of medicine, exactly as diplomated (*sic*) candidates for the army and navy are, in this country, sometimes found unfit for a commission."

LONDON MEDICAL SCHOOLS.—From the same source we quote the following census of these institutions: Total number of students, 1309; of whom there are at Guy's Hospital, 304; at University College, 207; at King's College, 110; at St. Thomas' Hospital, at St. Mary's, the Westminster, the Middlesex, the London, and St. George's Hospitals, each, less than 100.

FALSE COLORS.—We have more than once had occasion to allude to the airs of professional virtue sometimes assumed by quacks and charlatans. Unfortunately, tricks like these are often attended by a most unmerited success. For example, our British cousins are strangely willing to accept, as representative of the American profession, certain periodicals the real nature of which can scarcely escape intelligent scrutiny.

But the most unblushing attempt to "assume a virtue when you have it not" is in the case of one of the most notorious advertising charlatans of our day, who proposes to establish a drug-store in this city, and actually calls upon the medical profession for their countenance and support. Not one word of apology for his long course of profitable humbug; not one promise even of a change for the better: he simply says, in effect, "Gentlemen, in order to make more money, I want to add to my quack business that of a regular apothecary-shop;

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please send me your prescriptions, and I can make enough profit on them to retire before long."

STATE AID.—The Board of State Charities have, it is said, recommended to the Legislature an appropriation of $25,000 to the Pennsylvania Training School for Feeble-Minded Children, at Media, and another of $10,000 to the Hospital for Deformities, etc. (formerly the Orthopædic), in this city.

SPONGE-PAPER.—We see mention of a plan lately devised in France for incorporating finely-divided sponge with paper-pulp, which is then worked up into sheets of any desired thickness. The finished article is said to be highly absorbent, and to be of much value, not only in surgery, as a material for dressings, but for various purposes in the arts.

AGAINST CRAMMING.—We find the following in a foot-note to Lonsdale's "Life of Robert Knox, the Anatomist."

"Sir J. Gray stated in Parliament (1869) that the heads of the military and naval medical departments were so dissatisfied with the licensed surgeons and physicians who had presented themselves as candidates for public employment, that in three years (1865–8) they had to reject one hundred and fifty persons; yet these men were entitled to practise every branch of the healing art in Great Britain. Thus it is shown that the theoretical learning and cramming for the occasions will not bear the true test of examination for medical and surgical practice. It may again be asked if Hoffman's precept—'*Fuge medicos, et eorum medicamenta, si vis esse salvus*'—does not contain a good deal of truth."

CURIOUS EXPERIMENTATION.—We find in the *Medical Gazette*, quoted from a homœopathic periodical, a very remarkable contribution to legal (or rather to illegal) medicine. A culprit, having been executed by hanging, was cut down in fourteen minutes and a half, and two physicians began at once to attempt his restoration. In this they were from time to time interrupted by skirmishes with the sheriff, who was naturally averse to the undoing of his work, and who several times carried off their apparatus. In a room "crowded almost to suffocation," these philosophers continued their efforts for about seven hours, when "the opposition of the populace became so violent" that they had to desist. The victim, who bore the unprepossessing name of Skaggs, finally gave up the ghost at four o'clock the next morning.

It seems evident that the man was merely asphyxiated; the sentence of the law had not been carried out, and, as the *Medical Gazette* says, the hanging would have been to be repeated if the physicians had been successful. The *Gazette* wonders, therefore, and with reason, that the sheriff should have opposed what seemed likely to net for him a second fee.

A CANDID CONFESSION.—We find in one of our exchanges, quoted from a secular paper, the following:

"At a murder trial in Memphis, Tenn., wherein an attempt to establish insanity was made on the part of the defence, Dr. J. R. Allen was called as an expert, and testified as follows: 'I have been a practising physician for nearly thirty years; I have had some experience in cases of insanity, having been for ten years Superintendent of the Kentucky Lunatic Asylum, and during that time had over two thousand crazy people under my charge; I have heard the hypothetical case read by Mr. P——; I am here as an expert, and, before answering this question, would like to say that the more I studied the subject of insanity the less I understood it; and if you ask me where it begins or where it ends, neither I nor any physician in the world could tell you.'"

We trust the court ceased to press this "expert" for his opinion. Suppose he had been superintendent of that insane asylum for twenty years longer, what a depth of ignorance might he have reached!

ALIVE IN A COFFIN.—According to the *British Medical Journal*, the following statement comes from a reliable source. An "infant's father had died, and was to be buried in Ardwick Cemetery. The day before the burial, the infant was taken ill, and apparently died. A certificate of death was procured from a surgeon's assistant who had seen the child, and, to save expense, it was decided to place it in the same coffin with the father. This was done, and the next morning the bearers set off to the cemetery with their death-burden; but before reaching the graveyard, a cry was heard to issue from the coffin. The lid being removed, the infant was discovered alive and kicking. It was at once removed to a neighbor's house, but died eight hours afterwards."

MORTALITY OF PHILADELPHIA.—The following statements are derived from the returns made to the Health Office:

Interments for the week ending February 25, 1871 285

Adults, 148
Minors, 137

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 50)	102
Diseases of Brain and Nervous System	46
Debility, 13; Marasmus, 7; Old Age, 16	36
Zymotic Diseases	19
Diseases of Abdominal Organs	21
Diseases of Organs of Circulation	15
Stillborn	14
Casualties	7
Cancer	5
Intemperance	1
Unclassified, 17; Unknown, 2	19
	285

Interments for the week ending March 4, 1871 306

Adults, 164
Minors, 142

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 54)	93
Diseases of Brain and Nervous System	55
Debility, 18; Marasmus, 5; Old Age, 14	37
Zymotic Diseases	27
Diseases of Abdominal Organs	29
Diseases of Organs of Circulation	17
Stillborn	18
Casualties, 9; Suicide, 1	10
Cancer	3
Unclassified, 14; Unknown, 3	17
	306

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 18, 1871, TO MARCH 4, 1871, INCLUSIVE.

KEENEY, C. C., SURGEON.—By S. O. 25, Headquarters Military Division of the Pacific, February 13, 1871, assigned to duty as Attending-Surgeon at these Headquarters, and Examining-Surgeon at Recruiting Rendezvous at San Francisco, Cal.

HASSON, A. B., SURGEON.—By S. O. 35, Headquarters Department of the South, February 20, 1871, assigned to duty at Charleston, S.C.

MAGRUDER, D. L., SURGEON.—By S. O. 75, War Department, A. G. O., February 24, 1871, ordered to St. Louis, Mo., to attend officers and their families, examine recruits, and give medical attendance at St. Louis Arsenal.

MILHAU, J. J., SURGEON.—By S. O. 35, c. s., Headquarters Department of the South, relieved from duty as Attending-Surgeon at these Headquarters, and assigned to duty as Post-Surgeon at Taylor Barracks, Louisville, Kentucky.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—By S. O. 35, c. s., Headquarters Department of the South, assigned to duty at Savannah, Ga.

PHILLIPS, H. J., ASSISTANT-SURGEON.—By S. O. 24, Headquarters Military Division of the Pacific, the leave of absence granted in S. O. 5, c. s., is extended *thirty* days.

BARTHOLF, J. H., ASSISTANT-SURGEON.—By S. O. 35, c. s., Headquarters Department of the South, assigned to duty at Columbia, S.C.

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THE MEDICAL TIMES.

SATURDAY, APRIL 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF CARCINOMA OF THE STOMACH.

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

THE case upon which I shall lecture this morning has been under my care for a little more than a month. Although it has been during this period the subject of repeated and careful examination and of close study on my part, I find myself still hesitating in regard to the exact diagnosis. Notwithstanding this, I bring it before you to-day, in the hope that, by frankly showing you the difficulties that I have encountered, I may impress upon you the necessity of a thorough investigation into the history and symptoms of similar cases, should they ever chance to come under your care.

Without further preface, I shall proceed to read the notes of the case, which have been very carefully drawn up by my clinical assistant, Dr. George S. Gerhard.

Mary Brady, æt. 20, Irish, domestic, admitted November 8, 1870. No hereditary tendencies to any particular form of disease. One brother died of paralysis.

Her present illness began about six months before her admission into the hospital. She complained first of amenorrhœa and of digestive troubles, which do not seem to have differed materially from those of ordinary dyspepsia. One day, while washing clothes and leaning over a tub, she was suddenly seized with what she calls a "hard pain" in the lower part of the chest. This was relieved to a certain extent by moderate and distributed pressure, which she obtained by lying upon her abdomen. After the occurrence of this pain the dyspeptic symptoms became more distressing. She lost her appetite, vomiting frequently occurred after the taking of food, and she began to lose flesh and strength. She, however, continued at her work until the early part of the summer, when she went to the country, where she had some merely nominal work to do. About this time the matters vomited assumed a different character; they became dark and frothy or yeasty in appearance. This character they maintained for a long time. Milk and highly-seasoned and tender meats were the only kinds of food that she could retain upon her stomach. Vegetables invariably caused vomiting. She vomited blood on one occasion, only about one month before her admission into the hospital. It was in small quantity. Her bowels have always been constipated. While in the country her condition did not improve. She returned to the city in the fall, and again attempted to do the work of a domestic.

When admitted, she was pale and thin; had frequent vomiting; her bowels were constipated; her menses had never reappeared. Upon physical examination, the stomach was found to be dilated. No tumor could be felt in the region of the stomach. There was some soreness upon pressure, but no localized tenderness. No evidences of disease of the lungs or heart or of the nervous system. Tongue pale and slightly coated. Pulse frequent and very feeble.

December 15.—The vomiting continues, and so do all the symptoms above noted. She has had several syncopal attacks since yesterday morning.

December 16.—The matter vomited last evening was carefully examined this morning. Ejecta dark and frothy in appearance,—about eight fluidounces in amount. Microscopical examination revealed sarcinæ ventriculi, torulæ, starch-granules, partially-digested muscular fibre, and bodies resembling casts of the gastric tubules. Temp., 97.5°. No more syncopal attacks, those on the 14th having evidently been due to excessive exertion. A splashing sound heard upon succussion of the stomach.

Menstrual derangement, you have perceived, occurred early in the history of the case. This was followed in a short time by symptoms indicating disease of the stomach; but even up to the date of her admission into the hospital the former was the more prominent, at least in her own mind, for she did not at once or very readily call my attention to the latter. At the present time there is no doubt that the stomach is the organ principally diseased, but it is impossible to say with confidence in what that disease consists. It will occur to many of you, as it has already done to myself, that the case is one of cancer of the pylorus; but, while many of the symptoms indicate that such is the disease, there is wanting at least one of its usual signs: I refer to a tumor in the epigastric region. This has been diligently sought for by me at almost every visit; and others who, at my request, have examined the abdomen, have also failed to detect any indurated mass. I know, of course, that cancer of the stomach may exist in cases in which it is impossible at any time to detect a tumor, and that, on the other hand, a tumor may exist in the region ordinarily occupied by the stomach, which neither involves the stomach nor is of cancerous character; but in a case such as this, in which most of the rational symptoms point to malignant and obstructive disease of the pylorus, the discovery of a tumor would dispel all uncertainty as to the diagnosis. The detection of tumors in the abdominal cavity is frequently a matter of very great difficulty; and, no matter how expert in physical diagnosis the physician may be, they may, even when suspected and sought for, elude his search. I would not wish, therefore, to be understood as saying positively because I have found no tumor that therefore none exists. The recti muscles are very tense, and pressure over the stomach, if forcible, gives so much pain that I have not felt justified in carrying my examination beyond a certain point.

In reviewing some of the other symptoms presented by this case, we shall find that they differ from those usually met with in cancer. For example, hæmatemesis, or, more properly, the vomiting of altered blood, is a common occurrence in this disease. Now, although we have here a history of vomiting extending over a period of very nearly six months, blood has been thrown up but once, and then only in small quantity. The vomiting has been, as I have just said, a persistent feature in the case; the vomited matters are generally abundant, yeasty in appearance, and have the microscopical characters described in the notes. But on questioning the patient in regard to the time at which vomiting has taken place, she has told us, not that it was most frequent three hours after the taking of food,—or, in other words, at the time when the stomach is, in health, ready to allow its contents to pass into the duodenum,—but almost always at nine in the evening, or early in the morning, or at a time when the patient had either just gone to bed, or just got up,—or, in other words, at times when there was a change of position. Now, vomiting at these hours is not unfrequent in cases of dilatation of the stomach complicated with catarrh, and the ejections in the latter case frequently bear a close resemblance to those which have been observed in this case. We know, moreover, that the stomach is dilated here, for we have not only been able to elicit a distinct splashing sound by percussion of the stomach, but, by carefully-performed auscultatory percussion in the manner recommended in Dr. Fenwick's work on "Diseases of the Stomach," I have demonstrated in the wards that the stomach occupies an undue share of the abdominal

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cavity. Dilatation of the stomach, when accompanied by constant vomiting, will give rise, frequently, to great emaciation; but the emaciation, although progressive, is only so up to a certain point, and rarely attains the degree present in the case before us. The inanition in dilatation is not to be attributed entirely to the vomiting, but partly to a failure of the organ to contract upon its contents and to force them into the small intestines. A passive dilatation, when not dependent upon obstructive disease of the pylorus, is generally preceded by long-continued gastritis, of which we have no history here.

Pain has been at times very severe, but it has not been by any means constant, for at many of my visits she has told me that she was entirely free from it, and even when present it has not always been of the character usually met with in cancer. It has rarely been lancinating, but has usually been described as a feeling of soreness or of burning. She has, it is true, had paroxysmal attacks of severe pain, but these have not been very frequent. There is also tenderness over the whole of the stomach, which is so marked when deep pressure is made that it has seriously interfered with my examination of the case.

Another point, to which I have not yet called your attention, is the low temperature which has been observed in this case. You are probably aware that in the greater number of thermometric observations made in cases of cancer a low temperature has been noted; in fact, it may be almost asserted that the temperature of the body in cancer is low, as a rule, and that the elevations which are sometimes noticed in cases of this disease are due to intercurrent inflammation. The fact that the temperature is generally low in cancer was, I believe, first noticed by my colleague, Dr. J. M. Da Costa, in a communication made some years ago to the Pathological Society of this city. The temperature in this case is not more than half a degree lower than normal, —a decrease too slight to rest a diagnosis upon.

A round ulcer of the stomach may suggest itself to some of you as the possible cause of her illness; and certainly her youth and previous occupation would seem to point to this as being the disease; but a careful examination and consideration of all her symptoms will, I think, be found not to sustain this diagnosis. Thus, there is not present in the case, nor has there ever been, localized tenderness. There is no pain at any point of the spinal column; and although pain in the epigastric region has been a symptom of the case, it has rarely been acute, is not found to be more intense in certain positions of the patient than in others, and is not aggravated by the ingestion of food or of hot drinks. Moreover, blood has been vomited but once, and none has been passed by the bowels. Now, although ulcer may run its course without hemorrhage, it is rare, especially in a case which has lasted so long as the present, and in which there has been complete amenorrhœa for the last six months.

Still another condition is possible here. The pylorus may be obstructed, not by a tumor in its walls, but by one external to them. Sometimes, it is said, obstruction of the pylorus is produced by pressure of enlarged glands, which, being deeply placed in the abdominal cavity, escape detection. There is, however, in this case no enlargement of the external glands, except in the groin, and there it is not marked. I can find, moreover, no positive sign of phthisis pulmonalis: occasionally there has appeared to be slight relative dulness in the infra-clavicular region of the right side, but, as auscultation or palpation gives no sign of disease of the lungs, it is undoubtedly of no significance. Constant vomiting sometimes takes place in cases in which the coats of the stomach have undergone the albuminoid degeneration. I merely mention this. I have not at any time thought that this would be the proper interpretation of the case before you. A single organ is very rarely alone involved in this degeneration, and the alterations in other organs, when they occur, give rise to almost unmistakable symptoms. For instance, the albuminoid degeneration of the coats of the intestines gives rise to diarrhœa, while our patient is suffering from constipation. A similar alteration of the kidneys gives rise to albuminuria, which is not present in the case before you. Moreover, enlargement of the liver and spleen is an early sign of the general condition.

You will see from this hurried review of the symptoms that, although they indicate positively disease of the stomach, the nature of the disease is not so distinctly defined by them. My own diagnosis halts, so to speak, between cancer and simple dilatation. I have already given you the reasons which deter me from announcing positively that cancer exists. Of the dilatation I am certain, for auscultatory percussion furnishes us an almost certain means of detecting this; but whether it is the consequence of long-continued inflammation, or of obstructive disease, I confess my inability to decide.

In regard to the prognosis, I can only say that it is doubtful. In any case it is serious; if the disease is cancer, it is fatal. The vomiting has appeared to us to be a little less frequent during the last two weeks, and the emaciation has not progressed during that time.

There can be but little difference of opinion as to the proper treatment to be pursued in this case. The two prominent indications are, no matter what the exact lesion may be, to check the vomiting and to sustain the patient's strength. It would occur to few of you, I take it for granted, that a treatment specially directed to the re-establishment of the menses is at all indicated. The amenorrhœa, although it is said to have preceded the gastric symptoms, is now, at all events, of secondary consideration. If the result should show that there is no malignant disease, and should great improvement occur, it will then be time enough to busy ourselves about the imperfect performance of the menstrual functions. The treatment, moreover, which will arrest the vomiting and sustain the strength may also promote the re-establishment of the menses. In fulfilling the first indication, much may be accomplished by the proper regulation of the diet. Of course all articles of food not easily digested are to be avoided; but, more than this, articles likely to undergo fermentation in the stomach are not to be allowed; this will, of course, exclude from this patient's dietary all substances containing starch. As there exists an impediment to the passage of food through the pylorus, food in small bulk and of ready digestibility by the stomach is to be given. Beef-essence possesses this property to a great extent, and so does milk. Of medicines, perhaps there is none better calculated to check the vomiting and to allay the irritability of the stomach than the dilute hydrocyanic acid of our Pharmacopœia, which should be given in small doses, frequently repeated as occasion for its use arises. This remedy will also be of service in relieving pain. A medicine which would arrest fermentation seems also to be indicated; and carbolic acid suggests itself as possessing these properties. It has, however, a very disagreeable taste, and is sometimes irritating to the stomach. I will therefore wait a few days before ordering it. Fermentation is set up partly as a result of the retention of the food in the stomach, and is therefore simply a consequence of the disease, and is of minor importance. The antacids have already been tried, and have failed to do any good.

The second indication will be met by many of the means by which we have attempted to fulfil the first, and especially by the proper regulation of the diet. Her condition, however, indicates great debility; in fact, she

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has recently fainted in consequence of over-exertion, and it was with some difficulty that she was resuscitated. I have therefore directed that she should remain in bed, not rising for any purpose. This, strange as it may seem, she is not very willing to do. Tonics are also to be given. I have been giving her the elixir of bark, which certainly has not provoked immediate vomiting, and seems to be tolerated by the stomach. Stimulants are also administered. She has at present occasional doses of sherry wine in carbonic-acid water. Should the stomach become less retentive than it is at present, or should the general condition indicate that nothing is taken up by that organ, I shall have recourse to nutritive enemata, either alone or in connection with the treatment which I have just recommended. It may also be necessary to resort to external stimulation.

In this connection it may be well to call attention to the importance of examining the ejecta by the microscope. Neither torulæ nor sarcinæ ventriculi are found exclusively in cancer of the stomach, but they are, perhaps, more frequently found in that condition than in any other. In the matter vomited by this patient I detected starch-granules. Now, I had excluded starchy food from her diet-list, and, having explained to her why I did so, I was rather surprised at the discovery. After denying that she had disobeyed my order, she confessed at last that she had eaten a little farina, which had been brought to a patient in a neighboring bed. The large amount of mucus present also enabled me to recognize the existence of gastric catarrh.

I do not know that I can add anything to what I have said in regard to this case. I shall let you know the result, whatever it may be, at some future lecture. I fear that the case may be one of cancer of the pylorus; but, since no tumor can be discovered, I hope that it may prove to be one of simple dilatation.

[The progress of the case to its fatal termination was described in a subsequent lecture, as follows:]

The morbid specimens which the class sees upon the table were removed from the body of the young girl Mary Brady, whose case formed the subject of a clinical lecture about three weeks ago. The progress of the disease has, consequently, been very rapid since you saw her. A very few days after the lecture I discovered a tumor in the median line of the abdomen, about midway between the ensiform cartilage and the umbilicus, and have had, consequently, no doubt lately as to the nature of her disease; but it has proved fatal in a shorter time than I thought. I will read the notes of the case, as you will derive from them a full knowledge of its progress.

December 17.—Vomited last evening about one pint of the same kind of matter. Had a comfortable night. Bowels moved last night. Epigastric tenderness continues. Ordered acid. hydrocyan., dil., gtt. jj four times daily.

December 18.—Vomited again last evening; this morning more comfortable. Carbolic acid in small doses was ordered, in the hope that it would prevent the fermentation of the contents of the stomach.

December 19.—Has vomited repeatedly since last note. Up to the present time the vomiting has taken place some hours after the ingestion of food, and generally either late in the evening or very early in the morning. Now, however, food is thrown up almost immediately after being taken, and, as the emaciation is progressing, and is now excessively marked, it was to-day determined to attempt to nourish her by means of nutritious enemata; and, with this view, ℥iv of beef-tea is injected every six hours. Nitrate of silver gr. ⅓, t. d., was ordered in addition to the hydrocyanic and carbolic acids. Temperature continues low,—97.75°.

To-day for the first time there are to be felt, on palpation, distinctly nodulated bodies, resembling large glands, in the right hypochondrium. In the epigastrium there is also for the first time a hard mass to be felt, but its size and character cannot be clearly made out.

December 23.—Vomiting continues, although she is now restricted to milk by the mouth. Temperature continues low. Emaciation is extreme. The epigastric tumor is now very distinctly felt; it is about the size, apparently, of a duck's egg, and is very hard. It is so evident to-day that it is difficult to explain how it could have escaped detection after the very careful exploration of the abdomen which was made at almost every visit. The recti muscles have been exceedingly tense since the existence of a cancerous tumor was suspected, and it is probably owing to this fact that it has not been felt. It occupies a position a little to the right of the median line of the abdomen, midway between the ensiform cartilage and the umbilicus. The face of the patient is pale. Her eyes are sunken, and the malar bones stand out very prominently. Purpuric patches are seen on the skin of the chest and legs. She is evidently sinking. The nutritious enemata are said to be retained.

December 25.—The vomiting has become even more constant and distressing. She has vomited six times since eight o'clock last evening. Temp., 97.75° F.

December 27.—The patient appears to be sinking gradually. Her appearance and condition have changed very much in the last few days. She is very much emaciated; has a tendency to drowsiness. The temperature is still low. Last night it was 96°; this morning it is 95½. Pulse 100°.

December 28.—Is very weak this morning. She vomited several times during last night; the ejecta were for the first time of a dark chocolate color, which was undoubtedly due to the presence of altered blood. Can retain no kind of food. When quiet she does not seem to suffer, but when vomiting she has intense pain in the epigastrium, which is somewhat relieved by pressure and friction. The epigastric tumor is very distinctly felt and seen to-day.

December 29.—A dark-colored liquid, similar to that vomited yesterday, has been running from her mouth all night, and still continues to do so; it contains matter resembling coffee-grounds. Pulse very feeble and frequent.

December 30.—Death took place at 10 P.M. last night.

Post-mortem, twelve hours after death:

Body very much emaciated. Petechiæ upon the skin of the abdomen, chest, and legs. Rigor mortis not well marked.

Head not opened.

Abdomen.—Stomach more obliquely placed than normal; fat entirely absorbed from the two omenta; liver in its normal position. Stomach considerably dilated,—a scirrhous mass involving the pylorus; the walls of its middle and pyloric portion thickened. Some loose adhesions between the growth and the surrounding tissue had dragged the pylorus down. On cutting open the stomach, it was found to contain altered blood. Along its greater curvature the mucous membrane was found to be injected, especially near the pylorus. The mass did not involve the duodenum, but was firm and hard, and the peculiar cry was heard when a section was made. But little blood could be scraped from the faces of the section. Although the pyloric orifice was very much narrowed by the mass, it was not entirely occluded. The mesenteric glands were enlarged.

The liver was rather small; contained several small nodules, which were thought to be cancerous. Gall-bladder distended with a dark-colored liquid.

The kidneys were apparently healthy. The pancreas and spleen appeared to be free from disease.

Both ovaries were situated low in the pelvis, and were involved in the cancerous disease; the right was reniform, and was about two and three-fourths inches in length and one in breadth; the left ovary was much smaller. A section of the right ovary showed a dense whitish and firm tissue, with entire absence of proper tissue. The tissue cried under the knife, and was not vascular. The uterus was small and compressed by the enlarged ovaries, but was free from cancerous disease. The os uteri indicated that the woman had never borne children.

Thorax.—The lungs were studded here and there with white and black nodules,—the former probably cancerous, the latter produced by old hemorrhages. There was enlargement of the bronchial glands. The heart was small, but healthy. No disease of the blood-vessels.

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Portions of the tumor of the stomach, of the ovaries, and of the nodules found in the liver and lungs, were submitted to Dr. J. G. Richardson, Microscopist to the Hospital, for microscopical examination, and the following is taken from his report:

"I find that the pyloric tumor seems to be composed of fibrous tissue, with numerous connective tissue corpuscles, but without any cells resembling those of cancer, either in appearance or in arrangement; that the ovary exhibits chiefly an excess of connective tissue and elastic fibres; that the whitish deposit in the liver is chiefly composed of cicatricial tissue, surrounded by pale and atrophied liver-cells; and that one of the solid masses in the lungs is obviously cretaceous deposit, while another is shown by the microscope to be a nodule of fibrous tissue,—doubtless a cicatrix."

It will be seen by the above report of the post-mortem appearances that the disease was more extensive than had been supposed during the life of the patient. The lungs were studded with nodules, which presented similar microscopical character to those seen in the pyloric tumor, and were undoubtedly secondary to it. They were too small to give rise to any dulness on percussion, and for the same reason auscultation furnished no sign of their presence. The two or three small nodules in the liver of course created no disturbance of the function of that organ. The enlargement of the ovaries escaped detection probably from their being very deeply seated in the pelvis, for had they been in their usual position I could not have failed to feel them at some one of the repeated examinations of the abdomen.

A vaginal examination would undoubtedly have led to the detection of the disease of the ovaries, and I now, of course, regret that it was never made, although, in reviewing the case, I do not think it was ever indicated, and it would have been strenuously opposed by the patient herself.

ORIGINAL COMMUNICATIONS.

VACCINATION.

BY JOHN BELL, M.D.

THE present age has received various designations. It is certainly one of societies, for all subjects and for every conceivable purpose; in the main praiseworthy, by their contributing, or, at the least, endeavoring to contribute, to human progress, to promote human happiness, and to abate human misery. Often they are formed after mature reflection, and with a full knowledge of the objects to be attained by them. Sometimes they are the results of impulse, to redress imaginary grievances; sometimes to forward personal and selfish interests, on the alleged ground of philanthropy and public utility.

Under which of these categories shall we place the Anti-Vaccination League, recently formed in England? A certain number of persons have been associated together to protest against vaccination as a nuisance to be abated and a practice, despite long experience and government enactments in its favor, to be resisted. There are not wanting self-made martyrs to their creed —if a creed can consist in negatives—for a breach of the laws enforcing vaccination. These persons may be sincere in their absurdities; but sincerity is not always allied to wisdom and knowledge. A man is very sincere when he commits suicide, and another when he attempts to clear a five-barred gate or a ditch in the hunt, incurring the penalty, in case of failure, of breaking his neck or fracturing his skull. The Anti-Vaccination League ought to connect itself with another association, made up of self-constituted savants, who dissent entirely from the received opinion of astronomers and geographers that the earth is a sphere and revolves around the sun. On the contrary, we are assured by these revolutionists of science that our planet is nothing but a stationary plane, with some undulations of surface, over which the sun and moon and stars revolve; in fine, that we must abandon as mental crudities the system accredited and explained by Galileo, Copernicus, and Newton, and fall back on that taught by Ptolemy and the Greek philosophers. We might dismiss all these parties affected with *folie raisonnante* to the enjoyment of "Fools' Paradise;" but, unfortunately, the Anti-Vaccination League finds medical advocates, and it is not long since a volume was issued with a show of literature in its favor. Some excuse may be found for these heresies in the failure of too many practitioners of medicine to acquaint themselves with the history of vaccination, and to take all needful precautions to insure a successful result of the operation. On so important a subject there ought not to be any misconception, either in the minds of the profession at large, or of the public generally. Better to repeat truisms than that any person should remain in ignorance.

Seventy-two years have passed away since Edward Jenner, after a series of carefully-made observations and experiments, extending over a long period, announced publicly his discovery of the protection afforded against smallpox by the introduction of the lymph or matter of cow-pox into the human body, and that the protection was equally good when the matter was transmitted from person to person by puncture or scarification of the skin. This discovery, notwithstanding opposition from the learned, the religious, and the witty, gradually spread to all civilized countries, and has been almost universally recognized as the greatest boon conferred on mankind by the healing art, or, we should say, more appropriately, through it by an ever-beneficent Providence. The great truth once established, overweening confidence in vaccination as a prophylaxis of smallpox took the place of doubt and incredulity, and the conditions for a successful issue of the operation, laid down by Jenner himself, were neglected, and failures, easily explained in the individual cases, came to be viewed by some superficial inquirers as objections to the practice in general. It has been alleged, first, that the protecting power of vaccination is lost after a time, and that vaccinated persons not unfrequently catch the infection of smallpox, and some of them die in consequence; secondly, that vaccination gives rise to different diseases, especially those of the skin.

In reply to the first allegation, it should always be remembered that from the very beginning vaccination was not assumed to confer a charmed life against an attack of smallpox. Jenner and his immediate cotemporaries, Pearson and others, pointed out the fact of the supervention of variola after vaccina; which was attributed by some of them to the recency of the operation, so that there was not time for the system to be brought fully under its influence. At a later period, an opposite opinion was held,—viz., the greater liability to smallpox in those who have been vaccinated for a number of years. We have seen cases of supervening smallpox—varioloid—of great violence in children who had been well vaccinated; and we have also seen large numbers of adults, moving in the midst of variolous contagion, entirely exempt from its morbid influence; and others, also adults, who had been vaccinated in early life, but had very slight attacks of varioloid, although living night and day in a poisoned atmosphere of the most malignant smallpox. The chief causes of the variolous seizure of vaccinated persons must be traced to the use of spurious vaccine matter, and to those on whom the operation was performed being at the time affected with cutaneous disease, especially psoriasis or herpes.

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Jenner, while pointing out these causes of failure, laid the most stress upon the last one, the importance of which is, we fear, much neglected in the practice of vaccination. "The greatest of all impediments to correct vaccination," wrote the great discoverer, "is that which arises from an herpetic state of the skin." The accusation brought against vaccination, that it often gives rise to troublesome cutaneous eruptions, should be presented in a different form, and made to say that these eruptions often follow vaccination; they are a sequence, but not an effect. Children are peculiarly liable to and troubled with a variety of cutaneous eruptions besides the exanthemata. Mindful of the Jennerian injunction, we have, in one case, waited two years before vaccinating a child, on account of its being afflicted all that time with psoriasis.

After the great epidemic of smallpox which prevailed in Philadelphia in 1823–4, there were some physicians who, looking at the number of cases of varioloid in those who had been vaccinated, felt disposed to fall back on inoculation with variolous in place of vaccine virus, as affording a surer protection against the invasion of smallpox. But the fallacy of this opinion was shown by what transpired at this very time. We read in the history of the epidemic of 1823–4 (*N. Amer. Med. and Surg. Journ.*, vol. ii.) that the writer of this article and Dr. John K. Mitchell had under their care sixteen cases of secondary smallpox, of which seven were of persons who had had the disease naturally in early life, and nine of persons who had been inoculated for it in previous years. Of the seven attacked for the second time, three died, making a mortality of 42.85 per cent.; and of the nine who had been subjected to variolous inoculation, three died, the mortality being 33.33 per cent. The deaths in the unprotected, who numbered 155, were 85, or 54.8 per cent. A record of 64 cases of varioloid in those previously vaccinated shows that there was but one death,—that of a woman who had caught cold after recent delivery in the Almshouse. This would make but 1.57 per cent. mortality. Taking, in addition, the higher figure of 5.7 per cent. of 140 cases of varioloid in the Philadelphia Smallpox Hospital, under the charge of Dr. Bell, in the epidemic of 1860–1, and that of 7.69 per cent. in 247 cases of varioloid at the Hôtel-Dieu, in the recent epidemic in Paris, and the exemptions to be mentioned in the next sentence, we have an average mortality in those who took smallpox after vaccination of only 3.94 per cent. In the Royal Military Asylum, out of 39 boys attacked with varioloid, 12 exhibited marks of smallpox, and 27 those of vaccination. Of the only four deaths that occurred, all were from secondary smallpox, making a mortality of 33.33 per cent., but not one having resulted among the previously vaccinated. What a contrast is here presented in the protective power of vaccination with that so imperfectly furnished by previous smallpox, natural or inoculated! the first allowing only a mortality of less than 4 per cent., the second yielding a death-rate of 38 per cent.,—a figure approaching, if not equal to, that given by primary smallpox among the unprotected. Of the relative susceptibility of the vaccinated and of those who have had smallpox in former years to be affected on exposure to the poison of the latter, there is a difference of opinion. M. Serres stated some years ago that he had seen between 1700 and 1800 cases of smallpox in private and hospital practice, and that he was certain that the number of those affected with varioloid (smallpox) after vaccination was not greater than it was of those who had had secondary smallpox. Whatever may be the difference of belief on this point, one thing is certain,—viz., that, of the two above-mentioned classes, the probabilities of recovery without disfiguration are very great in the first, or the vaccinated, while in the second, or variolated, the percentage of deaths is always large and cases of disfiguration are numerous.

It is very desirable, however, that vaccination should give not only relative, but absolute, protection against smallpox, leaving out of view the small number of those who are not susceptible of being affected at all by the introduction of vaccine any more than they are by that of variolous matter. Persons of this constitution are met with in every community. The protection, exhausted by an indefinite length of time, is now renewed by revaccination, to be performed with the same care and consideration as the first vaccination. There is no agreement among writers and practitioners as to the interval that may be allowed to elapse between the first and second operations. The following conditions will help to guide us in having recourse to revaccination: when the history of the primary vaccination is incomplete in the individual case brought before us, and especially when the characteristic scar is wanting; when epidemic small-pox is prevailing; and when the individual is about to leave home and encounter exposure to smallpox. This last condition is peculiarly binding on travellers, soldiers, and sailors. We must respect also the wishes of the timid, and revaccinate them at any time they may wish, after our having stated to them the reasonable grounds for safety from a previous vaccination.

With a view of renewing the protective properties of the vaccine lymph, under the supposition of its having been weakened by the successive transmission from person to person during a term of years, and its probable adulteration, in vaccinators not always procuring pure lymph from healthy subjects, recourse was had to retrovaccination, or going back to members of the bovine species, especially milch cows and heifers, for a fresh supply. This measure is strenuously advocated as one of absolute necessity; and it has been carried out to a considerable extent, first in England, and subsequently in the continental countries of Europe,—and, above all, in Italy. Insertion of the new lymph thus procured is followed by a more early and active display of the symptoms of vaccination, and at times it produces suppurative inflammation, vitiating the quality of the lymph, first in the vesicle, and then in the scab. The propriety of retrovaccination, with the intention of obtaining purer lymph, is denied by those who insist on this product retaining its active property, unaffected by its transmission from one human being to another, from the time of the use of Jenner's original lymph to the present day. After all, however, looking to the fact of the carelessness so common in not watching the progress of vaccina from the insertion of the lymph to the stage of maturation, and the forming of a good scab, and also to our not having in this country a national institution for the collecting and giving out of lymph-stocks, we cannot but recommend the practice of retrovaccination. Every city and town in the United States should imitate the measures for this purpose adopted by the municipal authorities of Naples, Florence, and Venice, in procuring healthy cows or heifers—the latter to be preferred—and vaccinating them with lymph from healthy children. The resulting lymph is then to be used for vaccinating human subjects,—healthy children, selected for the purpose,—who will thus be made to furnish a supply taken from the vaccine vesicle at a proper time and put into hermetically-sealed small glass tubes, which can be sent, together with proper ivory points, in all directions where applications are made.

Notwithstanding all the drawbacks to general vaccination from the ignorance and prejudices of those who are either opposed to or indifferent on the subject, and from vaccinators not being always careful to adopt preliminary measures to insure a successful result for

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the operation, it has been shown that with the extension of the practice, and increased facilities for carrying it on, there has been a regularly diminishing proportion of deaths from smallpox in England and Wales. In an average of thirty years previous to the introduction of vaccination, the annual rate of deaths per million in those countries from smallpox was 3000. In successive periods since vaccination has been practised to 1863, the death-rate, as pointed out by Dr. Anstie (*Practitioner*), has been reduced to 171, the greatest reduction being in the last ten years,—1854-63,—when vaccination has been to a certain extent obligatory. It is now made so by acts of Parliament; and of its results we can judge by the following statement, in addition to that just made. In Scotland and Ireland, notwithstanding some defects in the vaccination acts for the two countries, smallpox has steadily diminished, and it is at present nearly extinct in both of them.

Dr. Anstie, in view of these facts, may well use the following language: "Upon no reasonable grounds can it be any longer denied that this compulsory extension of efficient vaccination to the whole population opens the sure road to the extinction of the smallpox." This writer gives a most decided negative to the question whether vaccine lymph degenerates by the mere fact of prolonged humanization, or its transmission from one human being to the other. The vaccine lymph procurable from the English National Institution is a continuation through an unbroken succession of human subjects. Its use on a recent occasion produced most decisive results. At five vaccination-stations in London, Liverpool, and Birmingham, 446 punctures were made with lancets armed with this lymph, and they gave rise to 443 typical and perfect vesicles, of such a character as has been always found to insure complete protection. There is one point of great practical moment, on which attention should be fixed, in order to give every child the fullest chance of being placed under vaccine influence. It is for us not to be discouraged by the failure of any result from the first operation, but to repeat it, at intervals which will vary from a few days to weeks, until the desired success is obtained. We have introduced into the arm of a child vaccine lymph at twelve different times before a regular vesicle was procured, although the scabs used were productive in other cases. It should be stated that the last and successful insertion was of fresh lymph, taken from a vesicle on the arm of another child. Even should all attempts fail in the periods of infancy and childhood, subsequent trials must be made, as with a change in the constitution of the young person there may come a susceptibility to be affected by the vaccine matter. A great step is made in the right direction by the city government appointing physicians to vaccinate all persons who apply to them, free of cost; but a further advance is necessary, which should compel parents to do their duty, and have their children vaccinated within a few months after birth. Until legal provision is made for a measure of this kind, certain precautions should be adopted, not only for the safety of the individual, but also of the community. No child should be admitted to a public school, no apprentice indentured or otherwise bound out to follow any art or trade, unless the party has been vaccinated. A careful sanitary review should be made of factories, hospitals and asylums of every kind, and prisons, to ascertain if there be any of the inmates not vaccinated, and, if so, to have them at once protected, by subjecting them to the requisite operation. Immigrants of every nationality should on their arrival be inspected, with a view of learning whether they have been duly vaccinated in their own country, or have had smallpox; and all those found to be unprotected ought to be subjected at once to vaccination by physicians whose duty it is, by the terms of their appointment, to give all applicants the benefit of their services.

It is enough for us simply to advert to the question of the number of punctures or incisions, whether one or more, for the insertion of vaccine lymph, and of a second puncture, two or three days after the first, the resulting vesicle of which is to overtake the first one, so that both shall maturate at the same time, and thus furnish proof of the lymph being genuine.

We would dwell more on the time for taking lymph from the vesicle,—from the fifth to the eighth day after vaccination,—and the care to be used not to rupture the vesicle, nor to renew the operations for abstracting the lymph too frequently, and thus bring on suppurative inflammation, were not the practice so general in this country of using the dried lymph in the scab and leaving the vesicle untouched.

The employment of scabs for the propagation of cowpox was first recommended by Mr. Bryce, of Edinburgh, in 1802. It is a good mode of transmitting vaccine matter to distant countries. On such occasions, and for keeping the scabs any length of time after they have fallen off, the hard or horny part alone should be that preserved, and should be carefully detached from the loose connective tissue with which it is surrounded.

The natural history of the vaccine lymph is somewhat curious. Dr. Jenner thought that the original source was in the heel of the horse when this animal is affected with the disorder called "grease." Both experiment and analogy are opposed to this view. Another hypothesis of his, revived of late years, was "that, how different soever they might be in some particulars, the cow-pox and the smallpox were in reality identical." Mr. Ceely's experiments of inoculating the cow with variolous virus, and vaccine matter resulting, which produced true vaccina in the human subject, were accredited by Mr. Farr, in his letter to the Registrar-General of England, in which he says *varioline*, or the specific matter of smallpox, is converted into vaccine. A fresh supply of vaccine matter has been sometimes procured in this way in Egypt. The inquiry has not, we believe, been followed up of late years with practical results.

The fears excited by accounts of syphilitic eruptions being transmitted by corrupt vaccine lymph have not been borne out by facts. The concurrent testimony of the ablest dermatologists, sustained by careful and diversified experiments, is entirely adverse to such an opinion. The same may be said of any other infections which have been sometimes supposed to result from vaccination with spurious lymph.

THE OPHTHALMOSCOPE IN MEDICAL PRACTICE.

Read before the Philadelphia County Medical Society, Feb. 22, 1871.

BY A. D. HALL, M.D.,
Surgeon to Wills Ophthalmic Hospital.

A PHYSICIAN not familiar with the practice of a surgeon in one of our ophthalmic hospitals or dispensaries would be surprised to see how much of the work is connected with medicine rather than surgery; in other words, that quite a large proportion of cases engage the attention, not from the stand-point of the eye as an entity, but from the local evidences there presented of affections of the system at large. Certain conditions of optic nerve change have been laid down as occurring quite frequently in diseases of the nervous centres, and the writer's object will be gained if investigation is stimulated in this direction. The wards of a children's hospital might afford opportunities for the study of the changes of the optic nerve in tubercular

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meningitis, or the condition of the same part in idiocy and insanity, in such a field as is furnished by our large hospitals for the insane.

Looking at the ophthalmoscope in the broadest view from the stand-point of the physician, it reveals the delicate reaction of the retina to many of the great systemic affections.

It is to be expected that oculists should be earnestly engaged upon the study of symptoms through this positive channel; but lately physicians abroad have given much thought and attention to the subject, and, for a comparatively new field, the list of writers and commentators is quite large. Galezowski, Bouchut, and Lancereaux in France, Ogle, Wordsworth, Hughlings Jackson, Hulke, and Hutchinson, of London, and Clifford Allbutt and Teale, of Leeds, have all endeavored to add to our knowledge upon the subject.

It is known to the ophthalmologist that there may be all the signs of an inflammation of the optic nerve, and yet vision may not be diminished in like proportion. Cases of this kind are unusual, and yet they do occur, and furnish us with precedents. The analogue of this is seen in medical cases, when either tubercle or simple meningitis runs its course and leaves no sign upon the optic disc.

Even should the symptoms of meningitis or other nervous central affections not always indicate themselves in changes of the optic nerve and retina, still the fact that they do so in a certain number of cases is enough to incite to further research and observation. The ground has not been more than broken upon this subject, and there remains much to unravel and classify. I can remember when the ophthalmoscope was first introduced into this city there were found those who thought it a useless and futile toy, more for amusement than an instrument of precision. And yet at the present day no oculist would examine a patient with any symptoms involving diminution of vision without its help, any more than the physician would for a moment hesitate to use the stethoscope, or his ear, where there was any question of pulmonary trouble.

As long ago as 1860, Dr. John Ogle wrote, "That the condition of the deeply-seated and delicate vessels of the eyeball may be, as it were, to a great extent (at least in some instances) a criterion of the state of the vessels of the brain-structure, may be with reason inferred from what we know of their anatomical relationship, their origin from the same arterial sources, and the innervation which, for obvious physiological reasons, they enjoy in common with each other."

Dr. Hughlings Jackson also observes, "It is, I submit, imperative, in all cases of severe cerebral disease, —at all events, in cases of an acute kind,—to examine the eyes with the ophthalmoscope, whether the patient complains of defect of sight or not."

Mr. Ernest Hart, in a paper on "The Ophthalmoscopic Signs of Constitutional Disease," read before the Harveian Society of London, January 21, 1869, remarks that the nervous and vascular tissues of the eye, as observed by the ophthalmoscope, gave characteristic indications not only of a number of cerebral and spinal diseases, but of many cardiac, visceral, and vascular diseases. In private practice the ophthalmoscope had decided the diagnosis when the question lay between typhoid and meningitis, and had indicated, more than once, impending cerebral or other organic disease, where only failure of sight was complained of. In a recent case he had prevented an insurance company from advancing a heavy sum on the life of a gentleman already insured, but in whom there had been ground for ophthalmic observation, owing to an anomaly of sight. The examination led to the conclusion that the arteries of the brain were atheromatous, which subsequent events confirmed.

It is well known to oculists that a peculiar form of retinitis occurs associated with Bright's disease of the kidney, accompanied by hypertrophy of the left ventricle of the heart. In such cases not unfrequently the diagnosis is made, not from the rude symptoms presented by the kidney change, but from the suggestive evidences afforded by the optic disc and retinal vessels. I can call to mind several such cases, and no doubt a search in the authorities would reveal many more. It is just in such cases that the united action of physician and surgeon is most happy. An illustration of this is well shown in the following case, occurring in the medical wards of St. Mary's Hospital during the spring of 1870.

J. S., æt. 21, native of the United States, was admitted March 1, 1870. His friends stated that during May, 1869, while intoxicated, he was exposed to rain and cold, and that shortly afterwards he was seized with spasms, rolling his head from side to side, biting his tongue, foaming at the mouth, with rigid extremities and unconsciousness. These spasms occurred every few minutes for two days, during which time he was not able to retain anything on his stomach. From this attack he slowly convalesced, but had afterwards, more or less constantly, dull pain in the head, on the right side, where he is said to have been wounded by a fall some time in March previous. Two weeks before admission, he was seized with an attack of vomiting, which persisted, in spite of treatment, for several days, and very much exhausted him. In January he noticed that his sight was growing defective. During the latter part of February, after getting wet in the rain, he had intense pain in the head, and constant vomiting. In this condition he applied for admission to St. Mary's Hospital, March 1, 1870. He was then very weak, and could not walk without assistance. His skin was sallow, tongue coated, breath offensive, heart's action feeble; there was no œdema of the face or limbs; the lungs were healthy; there was almost complete loss of vision. The principal symptoms were the pain in the head, the persistent vomiting, and the great diminution of vision. It was for this symptom that I was requested to examine the eyes with the ophthalmoscope. The left eye being rather more seriously affected, the pupil was dilated with atropia, but in the other it was not used. Externally the eyes appeared healthy, the pupils responding freely to light. He was merely able to count fingers held between him and the light with either eye. On ophthalmoscopic examination of the left eye, the position of the optic disc was found to be occupied by a grayish opaque swelling, which could only be made out by the convergence of the vessels, or rather the point of probable convergence, for the vessels appeared to be lost short of that point. The arteries could with difficulty be made out. The retinal veins were enlarged and tortuous, standing out in bold relief from the grayish-white track in which they ran. In the immediate neighborhood of the vessels were spots of hemorrhage, as though the blood had escaped from the overloaded vessels. Numerous yellow spots were found in the retina surrounding the optic disc. It was undoubtedly a case of retinitis, presenting all the appearances so well known as "retinitis albuminurica."

The urine was then examined, and found to precipitate half its bulk of albumen when tested by heat and nitric acid. Treatment was followed by no permanent good result. Vomiting continued. He became comatose, and died in two weeks. Although much desired, a post-mortem could not be obtained.

In diabetes somewhat similar appearances are presented,—at least they are sufficiently alike to direct attention to the state of the urine. There are the obscuration of the optic nerve, the interrupted retinal circulation, and the yellow patches scattered about in the

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retina. Several years ago a friend was asked to examine a gentleman's eyes for failing vision. This examination led to the discovery of diabetes, of which the physician in attendance was not aware. In Jaeger's Ophthalmoscopic Atlas, Vienna, 1869, pl. xiii. fig. 64, is the only colored drawing of these changes of which I am aware.

When the frequency of syphilitic iritis is taken into consideration, together with the fact that iritis is hardly ever alone, but in cases of any activity is associated with choroiditis, it is remarkable that more cases of specific retinitis do not occur. It presents nearly always a uniform haziness or opacity of the retina, but the white specks occurring in Bright's disease are scarcely ever present; there may be whitish or gray radiating striæ and ecchymosis and blood-effusion. There is always, or nearly always, extensive choroidal disease associated with it. It differs from ordinary retinitis, in that the inflammatory action is particularly apt to confine itself to circumscribed patches; and there is, moreover, a marked tendency on the part of the new formations to become organized, a white, glistening patch appearing in place of the originally inflamed tissue. These changes may run their course in a particular spot, and yet the remainder of the retina present no abnormal appearance whatever. Perhaps the vessels passing to and from the inflamed patch may be slightly congested, but this is by no means a constant appearance; they can seldom be traced beyond it, as the tissue in the act of becoming organized contracts and obliterates them.

The question of the diagnostic value of the ophthalmoscope in tubercular meningitis has excited renewed interest during the last year or so. In the course of a valuable paper upon this subject, Dr. Allbutt remarks, "The important question for us now to decide is whether we have any means of detecting with certainty the presence of meningitis in those slighter cases where we can now only guess at it, or can scarcely even guess, and in which cases we need not expect to find a large percentage of mortality. It is here, I think, that the ophthalmoscope comes to our assistance, and gives us the same kind of help in detecting incipient or slight degrees of ulcerative change in the lungs, which, without it, are beyond certain diagnosis. When a patient is seized with vomiting, headache, convulsions, and other symptoms of much meningitis, and when at the same time, on examination with the ophthalmoscope, I find congestion of the optic disc and retinal vessels, which is nearly always the case, then I have no hesitation in saying that the patient is suffering from meningitis at the base of the brain, and the autopsy proves the diagnosis to be correct.

"The final question is, How constant are the evidences of the ophthalmoscope in undoubted cases of tuberculous meningitis?

"I have examined the eyes in about twenty-five cases of tubercular meningitis of undoubted character, which were watched through their course and ended in death. In every one of those twenty-five cases I found ophthalmic changes, and I generally found them on the first examination. The changes were, most commonly, marked degrees of hyperæmia of the retinal vessels, which became swollen, dark, and tortuous. These changes were often traced up to the full development of ischæmia, which appeared next in frequency. Optic neuritis I found in about twenty-five per cent., as it occurred distinctly in six cases."

Assuming, then, the frequency with which optic neuritis is associated with intra-cranial disease, it may be well to ascertain what are the peculiar features of this disease. The changes in the papilla are those of volume, form, and appearance. It becomes much larger than in the normal state. Its contour is badly defined, puffy, and infiltrated by a serous exudation, which renders all the nerve obscure, and of a reddish-gray or whitish-gray tint. The papilla thus becomes entirely opaque. It is evidently veiled by an exudation of a gray-violet color, which spreads itself like a haze over the papilla and adjacent part of the retina. In consequence of this infiltration, the optic disc is very much swollen, its edges become very irregular, as if indented, and undistinguishable in places from the healthy part of the retina. The most varied phenomena are observed in the circulatory system of the optic nerve, —in the central vessels and those of cerebral origin. These vessels are also masked by the exudation, and, although easily visible at the point of their emergence upon the papilla, as soon as they arrive at its circumference disappear under the exudation, and reappear farther beyond the morbid limit of the papilla. The central veins are considerably enlarged, becoming tortuous, or even varicose; they are darker in color, and gorged with blood. At the point of convergence with the arteries they are noticeably flattened, and give rise to the appearance of a coagulum. The arteries are little altered; at times they appear a little paler. The capillaries are enormously developed, principally when the affection occupies the central part of the nerve, and when it is due to a neuritis accompanying tumors of the brain. There is then a considerable augmentation of the volume of all these capillaries, which, in the normal state, escape all ophthalmoscopic examination. In this affection they become apparent, and attain often a considerable volume, especially when examined in the erect image. This development of the capillaries is greatest in the cases of neuritis accompanying cerebral tumors occurring at the base of the brain and in the region of the optic commissure, and is sometimes so considerable that they can easily be mistaken for capillary apoplexies. This state of the vessels, however, can only be observed at the origin of the affection. The malady in its progress produces a softening and an atrophy of the papilla, a state in which the greater part of the capillary vessels are atrophied and completely disappear, which explains the white tint exhibited by the papilla. A considerable engorgement of all the capillaries may exist for a long time without the rupture of their walls, but sometimes they give way, producing hemorrhages more or less extensive and numerous in the papilla and retina. This happens more frequently in venous ruptures,—sometimes even of the principal branches. There is then presented in the neighborhood of the apoplexy the appearance of an interruption or flattening of the torn branch. The coincidence of optic neuritis with apoplexies and retinal exudations is the sign of affection of the walls of the vessels, and very often of the heart itself. The existence of the affection in both eyes at once is one of the most important characteristic signs of optic neuritis arising from cerebral malady. So constant is this phenomenon as to be almost pathognomonic. Confined to one eye, it derives its origin elsewhere than from the brain. Very seldom do exceptions to this rule occur.

There are two principal forms of optic neuritis: one, the engorged papilla, as described in Dr. Allbutt's papers, in which the swelling and œdema are owing to mechanical constriction of the nerve and its blood-vessels by the sclerotic ring, the congestion so produced deepening into inflammation; the other form, the one we have been considering as arising from affections of the brain, tubercular or otherwise.

I will not exhaust the patience of the society by a description of the appearance of the nerve in disease of the spinal cord; the same central cause produces a like result upon the discs.

If any one desires to know what the ophthalmoscope has done for medicine, let him turn to the subject

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of amaurosis as treated by writers twelve or fifteen years ago,—compare the labored, uncertain guesses at truth with the scientific precision of the present day,—and it will be seen at once that the whole subject has been revolutionized. As the stethoscope reveals processes not so well ascertained by mere rational signs, so the ophthalmoscope has been one of the means that have put modern medicine upon a basis of more rigorous investigation, substituting the evidence of actual observation for the speculation of doubt and probability. "Opportunity is fleeting, experience is deceptive, judgment is difficult," said the great Master of Medicine, more than twenty centuries ago. Judgment is still difficult, but the helps towards it have marvellously increased in these latter days. Let us use with zeal every means that may make our art more unerring.

NICKEL COIN IN BRONCHUS.

BY L. K. BALDWIN, M.D.

I WAS summoned in haste, on August 23, 1870, to see Agnes B., aged ten months, who (her mother stated) had swallowed a nickel cent. As there were no signs of strangulation, or other symptoms indicating a lodgment of the coin in the pharynx or œsophagus, I supposed that (if swallowed at all) it had passed into the stomach. I therefore did nothing more than order a purgative, and instruct the mother to watch the evacuations; assuring her, as is customary, that "*good coins always pass.*" The evacuations for several days were subjected to rigid scrutiny, but the missing cent failed to make its appearance. As nothing ever occurred to indicate the presence of the coin, either in the throat or the stomach, I felt convinced that it had been lost instead of swallowed, as no one actually saw the child swallow it; but I was mistaken, for the child, in a fit of coughing, on January 5, 1871, threw up the long-lost cent, after having had it secreted for a period of four months and fourteen days. It was tarnished, but not corroded. I could detect nothing in the throat when called to see the child, nor were there ever any indications of a foreign substance having been lodged there; yet it must have remained for that length of time in some recess outside of the stomach, for, had it reached the stomach, the acids with which it would naturally have come in contact would have corroded it more than the secretions to which it had been subjected.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CASE OF FRACTURE OF BOTH RADII AND OF THE PATELLA, WITH SEVERE LACERATED WOUNDS.

SERVICE OF PROF. D. HAYES AGNEW.

Reported by C. T. Hunter, M.D.

JAMES M., æt. 30, was admitted to the Pennsylvania Hospital, April 26, 1870, for Barton's fracture of both radii, extensive scalp-wounds, lacerated wounds of lower lip and tongue, and, in addition, what appeared to be a contusion of the right knee. These injuries were the result of a fall head-foremost, some twenty feet, from a loft at the Navy-yard. On admission, two or three hours after the occurrence of the accident, the patient presented well-defined symptoms of concussion of the brain, in addition to his other injuries. The fractured radii were dressed with Bond's pistol-shaped splints, the almost universal method practised in this institution for this form of fracture. The scalp-wounds were closed by strips of adhesive plaster, the wound of the lip by a couple of ordinary hare-lip sutures, and the wound of the tongue, which was fully an inch and a half long and involving its entire thickness, by a couple of silk sutures. Previous to his admission he had had free hemorrhage from the mouth and nose, but no blood had escaped from his ears.

On the third day, he for the first time became conscious, and from this time forward until his discharge from the hospital he complained almost constantly of severe headache. He was so restless that it became necessary to daily readjust his dressings, in order to keep the fragments in good position.

On the fourth day, a fly-blister was applied to the nape of his neck and his head shaved, which in a great measure relieved his headache and restlessness.

On the 10th of May the sutures were removed from the tongue, perfect union having taken place. The scalp-wounds and the wound of the lip had healed kindly, and the patient had been walking about the wards, with the aid of a cane, for two or three days past.

On the 13th of May, seventeen days after the date of the accident, the patient called our attention to his right knee, remarking at the same time that he was unable completely to extend his leg. A careful examination of the knee revealed a transverse fracture of the patella, with sufficient separation of the fragments to admit the finger between them. Probably the tendon of the quadriceps-extensor muscle had not been entirely torn across, otherwise there would have been more marked deformity and greater separation of the fragments, together with complete loss of power of extending the leg.

The patient, notwithstanding this injury to an important structure of his knee-joint, was able to walk about the wards and the yard, and into the clinic-room, with no assistance save that afforded by a cane. Dr. Agnew, the visiting surgeon, directed that the fragments of the fractured patella be approximated and retained in position by strips of adhesive plaster and a figure-of-8 bandage, and that the limb be placed on a single inclined plane.

The splints were removed from the forearms on the 22d of May, firm union, without a single trace of deformity, having taken place between the fragments. On the 9th of June the dressing was removed from the injured knee, and the patient, having procured a lace knee-cap, was permitted to get up and walk on his leg. He received his discharge on the 11th of June.

I have seen this patient several times since he left the hospital, and he has always assured me that he has almost perfect use of all his limbs. He has resumed work at the Navy-yard.

FRACTURE OF EXTERNAL CONDYLE OF HUMERUS, WITH EXTERNAL LATERAL LUXATION OF BONES OF FOREARM.

SERVICE OF PROF. D. HAYES AGNEW.

Reported by C. T. Hunter, M.D.

MARGARET MCE——, æt. 29, was admitted to the Pennsylvania Hospital on the 7th of April, 1870, for a fracture of the external condyle of the humerus, complicated with external lateral displacement of the bones of the forearm. These injuries had been inflicted five days before the date of her admission, by her husband, who, in a drunken frolic, swung her by her hand violently across a stove. Immediately after receiving them she applied to a doctor in the neighborhood, who gave her something with which to bathe the parts.

When first admitted, her arm, forearm, and hand were greatly swollen, and the elbow was exquisitely painful on the slightest motion or pressure. For the first two days the whole limb was enveloped in a lotion consisting of equal parts of laudanum and lead-water, and supported on a pillow, the patient being confined to bed.

On the third day, the tumefaction having subsided in a considerable degree, a careful examination was made by Dr. Agnew, the attending surgeon, and the fracture and dislocation detected. He was unable, however, to find the exact location of the fragment that had been broken off from the external condyle. This fragment had apparently become wedged in between the bones forming the elbow-joint, and resisted all attempts to reduce the luxated radius and ulna,

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nor was it possible to flex the forearm to a less degree than a right angle, nor to completely extend it. The limb was dressed with an enveloping bandage and an anterior obtuse-angle splint. After the second week, when all the acute symptoms had disappeared, the angle of the splint was changed two or three times a week. Four weeks after admission, Stromeyer's splint was applied, and its angle changed daily. It was impossible, even with the aid of this powerful agent, to increase the range of motion in the limb.

On the 16th of May all dressing was left off, save an enveloping bandage, and on the 21st of May the patient was discharged.

One week later, she returned to show me her arm. She said that she had been doing light work with her arm since leaving the hospital. On examining the limb, I found that the range of movement, though good, had not been increased, but that the parts about the elbow-joint were quite as strong as ever.

THE COMMUNICABILITY OF SYPHILIS BY VACCINATION (*Inaug. Diss. von A. Rahmer*, Breslau, 1869).—Köbner states, as the result of numerous experiments, where inoculation was effected by fluids containing the syphilitic virus in a very diluted state (as, for example, the blood in certain periods of constitutional syphilis), that the *quantity* used is a factor of great importance in the solution of the problem. The attempts at inoculation made by Waller, Pellizari, Thiry, and the anonymous surgeon of the Palatinate, were always negative when the experimenters trusted to small scratches with the lancet, and successful only when a *large* quantity of syphilitic blood was brought in contact with extensive absorbing surfaces, produced by vesication or by cut cups. It is therefore impossible, argues Rahmer, that the minimum amount of blood which may be mixed with the vaccine lymph should be, as Viennois stated in 1860, the only vehicle by means of which syphilis can be communicated by vaccination. Again, the small number of successful inoculations by means of syphilitic blood, as compared with the frequency of the cases when the disease follows vaccination from the arm of a person afflicted with syphilis, is a powerful argument against the theory that the blood is the only carrier of the poison. According to the statistics published by Roberts, based on nineteen inoculations with syphilitic blood, the disease followed vaccination from infants affected with syphilis in 66 per cent., while the inoculations succeeded only in 26 per cent.

According to the experiments of Schreier and others, syphilis cannot be communicated by means of the clear, unmixed vaccine lymph taken from the arm of a child known to have constitutional syphilis; nor is this possible, as Boeck has shown by his inoculations, even of lymph mixed with blood which is taken from the vaccine vesicle of a syphilitic child, unless the blood is present in a larger quantity than is usually the case in vaccination. Hence, according to Köbner, we must seek another vehicle, and this is the secretion of a local syphilitic affection, which has its seat in the basis of the pseudo-vaccine pustule. This may present itself either in the form of an ulceration or commencing induration, dating back only to the time of vaccination, or it may be an infiltration, which is a local manifestation of constitutional syphilis which has already existed some time. For instance, if a child with latent hereditary syphilis, or, it may be, manifest constitutional syphilis, is vaccinated, we find that after a few days a syphilitic infiltration takes place around the vaccine vesicle, which itself follows a perfectly normal development. If the lymph from this vesicle be used in vaccinating another child, and, through carelessness, the product of the syphilitic infiltration also be conveyed on the point of the lancet, the disease will certainly be communicated to the healthy child, and we will have a specific ulcer developed at the place of inoculation, either at once, on the eighth or tenth day, or subsequently, in the cicatrix itself. As a rule, the vaccine pustule has a normal appearance on the eighth or tenth day after vaccination, and the first symptoms of constitutional syphilis appear from four to eight weeks later. The supposition of so rapid a manifestation of constitutional syphilis after vaccination is at variance with the opinions of former observers, who have described a period of incubation lasting several weeks; it is, however, in strict accordance with the experiments of Köbner and Bidencap, which show that the inoculation of the secretions of the products of secondary syphilis may produce pustules, and subsequently ulcers, in a space of time varying from forty-eight to seventy-two hours. Bohn, from whose review of Rahmer's thesis this abstract is taken, urges the necessity of a stringent adherence to these rules: 1. That the pure, clear lymph should alone be used; 2. That this should be taken from children who are at least from three to six months old, since by this time hereditary syphilis, if present, will certainly have manifested itself.

ADDISON'S DISEASE AND SCLERODERMIA.—Dr. J. M. Rossbach, of Würzburg, relates (*Virchow's Archives*, August, 1870, and *Glasgow Med. Journal*, November, 1870) a case of the coexistence of these two diseases in the same patient, but during life the symptoms of Addison's disease were the more prominent. There was no disease of the supra-renal capsules discovered after death. The state of the skin termed sclerodermia existed in this case mostly on the extremities, and consisted in the conversion of the subcutaneous adipose tissue into firm connective tissue, with hypertrophy of the smooth muscular elements of the skin. The pigmentation of the skin presented some marked peculiarities. In the greater number of recorded cases of sclerodermia there has been no pigmentation, and where it did exist, the color was more of a brown, or yellowish-brown, than the deep bronze of Addison's disease. In the author's case, the color, where it existed, was very intense, but it was almost entirely absent in the parts where the sclerodermia was present, so that in respect to pigmentation the skin exhibited the peculiarities of both diseases. Again, the usual seat of increase of pigment is the rete mucosum, forming a simple increase or hyperplasia of the pre-existing pigment; in some cases, however, it has been observed to a less extent in the cutis itself; but in the case related, the pigment not only existed in the cutis, but was greater in amount there than in the rete mucosum, being especially developed around the sweat-glands. The subject will be concluded in a succeeding paper.

INFLAMMATION.—Dr. V. Feltz, of Strasbourg, has addressed to the French Academy of Sciences (*Comptes Rendus*, June 6, 1870, and *Quarterly Journal of Microscopical Science*, Oct. 1870) a short account of observations on inflammation, in which he states that he has failed to see the passage of white corpuscles through the vascular walls described by Cohnheim. In inflammation of the peritoneum, he has convinced himself that the leucocytes are not, at all events, produced by proliferation of the epithelium; but in inflammation of the cornea the connective-tissue corpuscles may give rise to new elements, which assume the form of leucocytes.

PERFORATION OF THE UTERUS WITH THE SOUND.—Dr. Alt (*Berliner Klinische Wochenschrift*, Oct. 17, 1870; from *N. Y. Med. Jour.*, Jan. 1871, p. 97) remarks that when the uterine sound has been introduced to a depth much beyond what is normal, it is supposed to have entered an enlarged Fallopian tube. Three such cases have lately occurred, which put the subject in a different light. In the first case, one month after an attack of puerperal fever, the sound was passed to the depth of two and a half inches, but on slight pressure it entered to a depth of six and a half inches, and its tip was distinctly felt through the abdominal walls. No pain was experienced, nor was any subsequent peritonitis developed.

In the second case, four months after an attack of puerperal fever, attended with metastatic abscesses, the sound was introduced into the uterus, which was of normal size. Upon slight pressure, it passed to a depth of five inches. The temperature and pulse rose at once, but on the next day she was quite well, and four days later left her bed.

In the third case, a few months after the delivery of a tuberculous patient, the sound was introduced to a depth of seven inches, and was distinctly felt through the thin abdominal walls. No pain or inflammation followed. The woman subsequently died of tuberculosis, and the autopsy revealed a perforation of the left angle of the uterus. No traces of recent peritonitis were found, but the uterine walls were in a state of fatty degeneration, and easily torn.

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EDITORIAL.

MODERN THERAPEUTICS AND THE METHODS OF ADVANCEMENT.

No. I.

IF there be any peculiar, distinguishing trait of the general medical mind of the passing quarter of a century, it is, we conceive, the wide-spread discontent with our present methods of combating disease. A sort of therapeutical unrest pervades the whole professional atmosphere. Pathology, it is said, has advanced with giant strides, and diagnosis has kept pace with it, while therapeutics has lagged far behind, so that it is still without any definite, fixed principles, at best but a chaos of forces, applied almost at random and according to the whims of each individual medicus. The treatment of rheumatism is the favorite, oft-cited illustration of this. In this affection, bleeding, nitrate of potash, quinine, mercurials, large doses of alkalies, bromides, veratria, flying-blisters, and a score of other remedies, all undoubtedly have their advocates, clamorous for a hearing; and above the tumult sound the trumpet-tones of a Chambers, — "Put your patients between blankets and let them alone." Such, in truth, is the jubilee with which the profession celebrates its nearly two thousand years of medical experience. Is it a wonder, then, that there are men who, deafened by the conflicting sounds, simply close their ears to all alike, and take refuge in the calm harbor of nihilism? Yet to do this is to lie down content to rest in the sleep of the lotos-eater, hopeless of future power. In the noise and din of the workshop alone can be fashioned any good thing. Out of the heat and smoke of conflict cometh the greatest human good. In the present discontent—in the universal, intense, eager longing and striving for better methods—in the very discord and confusion—are to be found the surest auguries of future advancement.

Though this be so, yet it is well to pause sometimes long enough to see how far the battle has progressed, and in what direction it shall best be pushed forward. An examination of the numerous complaints against our present system, if such it can be called, will show that the burden of very many of them is for "fixed principles." Exactly what is meant by this is not, perhaps, easy to determine; but if some guiding foundation-idea—some universal law—some "similia similibus curantur"—is expected, our poor, abused modern therapeutics has at least hobbled far enough onward to show that none such exists. That there are not, even now, certain grand principles of practice thoroughly established, cannot, however, be maintained, in the face of such universally recognized maxims as, "Exanthematous fevers should be guided, not interrupted." Already, then, we maintain, certain prominent landmarks are revealed; and although gaps and waste places most painfully abound, yet enough of fixedness is apparent to shadow out dimly the great system of modern therapeutics, whose perfection shall be one of the grandest and last, as most difficult, of human achievements.

Variety is not disunity, a fact—often lost sight of by critics—whose happiest illustration is to be found in the treatment of the disease already alluded to.

Men never will act and think alike so long as they are at once fallible and intelligent. If there are numerous paths to the same goal, each will be trodden by its votaries, unless one be very distinctly proven to be much shorter and safer than the others.

In all the various active methods of treating rheumatism the same end is attained,—*i.e.* depletion and elimination; the various plans are merely different roads to the one goal. Pathology is spoken of everywhere respectfully, while therapeutics is often sneered at; yet it is very evident that there is at least as much real unity in the various theories of the treatment as of the pathology of rheumatism.

We are, then, distinctly among those who believe that, even as now understood, the science or art of therapeutics is of inestimable value. No one is more hopeful for the future, and no one, therefore, will admit more freely that the great, pressing problem of to-day is, How shall our treatment of disease be best improved? There seem to be but two great highways: the one, that of empiricism; the other, that of scientific research. "Experience," says the old proverb, "is the mother of wisdom." Surely, in medical matters, the time of her sorrow and travail is long, for although two thousand years of waiting and striving have passed by, not yet can she rejoice because a man-child is born unto her. That the profession is indebted to empirical experience for most of its present power is true, but that experience has told so many contradictory stories as to give good ground for constant doubting is none the less true. To experience appealed the sages of old to prove the virtues of their draughts of horsedung- and cockroach-tea. By experience did the past generation of doctors know that not to bleed a man suffering from pneumonia was to consign him to an unopened grave, while by the same token do many of their children assert that to bleed is to kill. The great present apostle of clinical empiricism as the only method of making therapeutics an exact science, is Prof. Niemeyer, of Germany. His plan is that close and careful analysis of cases shall be made before and after the administration of a remedy, and, if the results are favorable, that the use of the drug be recommended in similar cases. This plan the doctor extols to the skies, and asserts "that experiments made with medicaments

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upon the lower animals, or upon healthy human beings, have as yet been of no direct service to our means of treating disease, and that a continuation of such experiments gives no prospect of such service."

Dr. Niemeyer is forced, however, to acknowledge that in very many instances clinical experience has in the past led men most falsely; but now, he asserts, the more rigorous methods of observation—the thermometer, stethoscope, and other modern inventions—have at last made the crooked places straight, and thrown up a broad highway, along which the path is plain.

As a most brilliant result of his plan, he points to the establishment of precise indications for the use of digitalis in diseases of the heart.

As to the truth of the latter assertion we do not here take absolute issue, but we think most practitioners will join us in the wish that it was as true at the bedside as at the writing-desk. Supposing it to contain a fair measure of truth, however, do we know how or why digitalis acts? That such knowledge would increase our power and confidence, making us far more sure that our trusted facts would not wither in the future as they have in the past, who can deny? It is just here clinical experience entirely breaks down. Has it taught us how a single drug acts? Has it been able to explain so simple a problem as how atropia dilates the pupil? The world is yet ringing with the answer to Dr. Niemeyer's sneer at the scientific study of therapeutics: chloral—the greatest single addition to our means of treating disease, save anæsthetics and cod-liver oil, that modern medicine has known—was a discovery solely and purely the result of scientific induction,—a discovery, too, of far more value than the half-revealed facts in regard to digitalis, of which he seems so proud.

That clinical bedside study must be the ultimate test of the value of treatment is most wholesome doctrine. But such doctrine is far different from the teachings of Niemeyer. We hold that it should be the *final* test; that before clinical therapeusis can make very great and really permanent advancement, or at least before it can approach its highest perfection, it must be preceded by a deep, exhaustive study of the natural history of disease and of the powers of the drugs or instruments with which it works. Then, indeed, may experience become the mother of wisdom.

One of the great modern inventions is the tabular statement of results; and we have always thought that the father of lies must have had a close connection with its origin. All statistical comparisons in medical matters are notoriously poor guides, very apt to lead their followers into the quagmire of doubt and uncertainty, or the slough of absolute error, which, by a sort of mental mirage, stretches out into a fair landscape of truth. The varying fatality of different epidemics, the effects of overcrowding and bad sanitation of hospitals, constitutional differences in different classes of patients,—in a word, the infinitely various conditions of the past and present of the persons treated, — must always throw a shadow of distrust over statistical studies; but when to these are added the varying capability, carefulness, and honesty of the men from whose observations the statistics are compiled, the search for truth in this way certainly demands more than human sagacity. Capability, carefulness, and honesty must always remain unknown quantities in such equations. Our own comparatively brief experience has engendered a most painful want of confidence in published results: cases falsified, wittingly sometimes, but more often unwittingly through enthusiasm or carelessness, we have seen so often dropped into the great heap of medical statistics, that a deep suspicion as to the quality of the whole mass has been constantly strengthening, year after year. Again, the living praise the doctor; the dead are buried out of sight, and no man knoweth it. The more roseate the experience of any, the more eager is he to expose his canvas to public gaze.

A curious instance of the value of the statistical method is to be found in a comparison of the recent treatises of Drs. E. Kennedy and M. Duncan on Hospitalism. They both take the statistics of the Dublin Lying-in Hospitals for their bases, shake them a little in their dice-boxes, and, lo! for the one they put a stamp of death, for the other the stamp of life, upon the use of large hospitals. *Verbum sat sapienti.*

The disease over which the statistical battle has waxed hottest is pneumonia, and as a fair sample may be taken the tables of Dr. Rogers (The Present State of Therapeutics, London, 1870). They are fairly compiled, as the manner is, and indicate very decidedly that the nihilistic treatment is the best. They are, however, in truth, of but the usual value,—*i.e.* none whatever; a mere hodge-podge of all ages, ranks, and conditions of patients suffering from all forms and varieties of a disease in which several different anatomical lesions are found after death, but to which the systematist has given the name of pneumonia. The practitioner is not very deep in his art who has not learned that pathological unity is often associated with therapeutical diversity. The systematist may very properly consider pneumonia as a single disease, but to the thinking therapeutist it is several affections, which are, from his stand-point, much more diverse than many which the systematist ranks as distinct species. The broken-down pauper or debauchee, the overworked, anxious business man, attacked by pneumonia, may be saved, and saved only, by free stimulation and support; while the only hope for life to the sturdy young farmer, gasping for breath, with lungs and heart paralyzed by congestion, may be found in free bleeding. Much better and more rationally might the various exanthemata be tabulated as one disorder, and the practitioner still be called on to prostrate himself before the Juggernaut of the modern statistician. We protest against all these tables, which are being so constantly hurled at the profession to dragoon them into uniformity with some pet idea of their originators. We subscribe most fervently to the sentiment of some forgotten author, that "modern statistics are a howling ocean, into which no diver ever went far and came back sane."

It is said that among the olden Jews the test of the

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truth of the claims of any one stating himself to be a prophet was his power of persuading the people that he was sent from God. If he was able to inspire in the hearts of the people the belief in his divine mission, he had fulfilled the requisite conditions, and could demand the legal recognition of his prophethood.

Somewhat similar is it in regard to therapeutical measures. The general professional mind is, of course, often mistaken,—constantly dropping to-day what it yesterday held firmly; yet it is always eagerly attentive for any new thing that makes promise of usefulness, and we had rather trust it for holding fast to a good thing than to any statistical table. The fact of the general confidence in any measure of treatment is very good ground for believing that nothing better has been proposed, and, when any new method is brought forward, the test of its value is its power to command recognition, just as in the case of the Jewish prophet. Looking over the field of past clinical research, and believing in this receptive and sifting power of the general profession, there appears to be good ground for expecting a slow improvement—often one-sided, often, for a time, hasty and immature, but still a sure improvement—in therapeutics by clinical study, even if unaided by the physiologist.

For reasons, however, before asserted, it must be allowed that if clinicians, refusing the assistance of the experimentalist, attempt to solve alone the problem of the treatment of disease, they will not only progress most painfully and slowly, but will also fail in ever attaining the highest good. Valuable as mere empiricism has been, and still is, it is very demonstrable that it would be vastly more valuable if founded upon and travelling side by side with what may be called experimental therapeutics. On this the second heading of our theme, however, we cannot to-day enter, but must leave it for a future number.

TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting, held February 22, 1871, Prof. J. Aitken Meigs, President, in the chair,

Dr. A. D. Hall read a paper entitled "The Ophthalmoscope in Medical Practice." (See this number of *The Medical Times*.)

Dr. Lee said he had listened with interest to the speaker, and would have been glad to hear him give the appearances of the retina in cases of disease of the spinal cord.

Dr. Hall, in reply to Dr. Lee, regretted that he did not have the opportunity to examine the retina in diseases of the spinal cord. He had intended his paper to be a suggestive one, that it might stimulate to observation with the ophthalmoscope those who treated cases of disease of the nervous system.

Dr. Turnbull said he had heard with much interest the valuable paper by Dr. Hall, and was able by his own experience to confirm many of his statements as to the value of the ophthalmoscope in medical practice. In no department has it given greater precision than in that of the study and treatment of syphilitic affections of the eye. The following is an interesting case of diseased retina, in which the sheath of the third pair of nerves was also involved:

James T., æt. 26, a printer, had almost complete loss of vision in right eye, with ptosis. In 1866, he contracted syphilis, and had several chancres, which were cauterized. He was also treated by mercurials, and the sores healed. About twelve months later, after exposure, he was seized with intense pain in his head, followed by swelling over the frontal bone, and incapacity to swallow or talk. Tinct. of colocynth, followed by large doses of the iodide of potassium, relieved these symptoms. September 16, 1870, he was again attacked with pain in the temple, dilatation of the pupil, and loss of power to raise the right eyelid; vision was double, and a mist or halo surrounded every object. When he walked upon a level surface, he had but little difficulty; but if an object was in the way, he was apt to trip, or even fall. The treatment consisted in blistering over the forehead, subsequent dressing with one-thirty-second gr. sulphate of strychnia, and internally iodide of potassium and bichloride of mercury. September 27.—Pain had disappeared, and the eye moved better. Bowels being regulated by an aperient pill of aloes, the appetite was good, pulse regular. Ophthalmoscopic examination revealed great hyperæmia, numerous small vessels over the retina also giving a bluish-gray tint to the optic discs. He can read with right eye No. 6½ Snellen. No halo round the object; can turn the eye, though with difficulty, to right and left. No pain. (The speaker illustrated the appearances at this date by a photograph.) On October 17, could elevate the eyelid several lines higher than represented in photograph. Vision had also improved. When he looked directly forward, objects did not appear double; but if he looked to one side, double vision remained. When he smiled he still contorted the face. The treatment was continued. October 20.—Suffering with deafness and tinnitus aurium, which on examination were found to depend upon altered cerumen. These symptoms were relieved by injecting a solution of warm bicarbonate of soda. The Eustachian tube was catheterised. November 11.—Improvement continued. The interrupted current as recommended by Myers—electro-positive pole to the hand and negative to the closed eyelids—was applied for a few minutes. It caused contraction and discharge of tears. Stated he was better able to elevate the lid; could read but a few letters of 8½ Snellen, and noted a haze around the light. November 28.—Again applied the current. Vision much improved; able to read 6½, and has no pain. Able to walk to the office without help,—a distance of eight squares. Has taken no medicine since the 3d inst. In November and December he continued to improve, until his eyelid acted as well as the sound one, but vision was still defective. In January he had another relapse, with vertigo. He was taken in the street, while going to his place of business. When he reached home he began to vomit. This continued for about twelve hours, with pain in the head and a return of the ptosis, together with great feebleness of the limbs. February 4, 1871.—Pain was relieved by the use of iodide of potassium,—20 grs. every three hours. Has been smoking too much tobacco. Was directed to mix mullein-leaves with the tobacco. Dizziness seemed to be increased by smoking. February 11.—Pain has disappeared; more motion of the limbs; getting stout. Has resumed the coil of Duchenne, and employs medicine only once a day.

It will be noticed that in this case the excessive use of tobacco was always injurious; and yet Dr. Turnbull had met with but few cases of affection of the retina, the result of the habitual use of tobacco. Mr. Carter, the translator of "Zander on the Ophthalmoscope," is of the same opinion, and he quotes letters from two of his friends,—one from Dr. Dickson, the physician of "Her Majesty's Embassy" at Constantinople, and the other from Mr. Farquhar, who was for many years the Surgeon to the British Consulate at Alexandria. Mr. Farquhar states "that among the many thousand diseased eyes that he has examined, it was always a mystery to him that he saw so very few cases of this affection." Dr. Dickson writes that "amaurosis, taking the term in its widest sense, is not a common complaint in Constantinople or in Turkey, where smoking is universal. The usual amount of tobacco consumed by one person per month may be estimated at an

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'ohe,' or about two and five-sevenths pounds avoirdupois." Yet we have the authority of such careful observers as Makenzie, and more recently Critchett, Wordsworth, Hutchinson, and Sichel, who believe that it gives rise to a peculiar and distinctive form of loss of sight, which they have termed "tobacco amaurosis." So far as his own experience went, Dr. Turnbull had always found that those who consumed a very large quantity of tobacco employed stimulants very freely; and this always produces injurious effects upon the liver, stomach, and other organs, and ultimately upon the eyes.

DR. HALL, in reply to Dr. Turnbull, said he had not seen any clear case of "tobacco amaurosis." In those cases in which it might have been supposed to exist, it was found that alcohol was consumed to excess. In the cases which had come under his notice, he attributed the nerve-atrophy to alcohol rather than tobacco. As to the frequency with which changes in the optic nerve occur in connection with tubercular meningitis, he thought that Bouchut had overrated it. It depends upon the situation of the pathological changes as to their effect upon the disc. We may have a total meningitis, and no trace of it upon the nerve or retina. He had seen quite a number of cases of loss of the eye, during and after cerebro-spinal meningitis. In one case apparently hopeless, at Dr. Da Costa's suggestion iodide of potassium was used in large and frequent doses, and the patient, a child about five years of age, recovered with a soft and atrophied eye. He had also seen cases in hospital and private practice of wasted, disorganized eyes attributed, and no doubt justly, to the so-called "spotted fever." In regard to the treatment of iritis, he relied very much on the local use of atropia. Many cases can be treated in this way without other measures. A recent case he certainly would treat in this way, reserving local depletion and the use of mercury internally for those cases where the inflammation did not yield to the atropia. Mercurial inunction, as lately revived in England, and the mercurial vapor-bath, did not prove so successful in his hands as in those of its advocates. The prompt treatment of iritis is exceedingly important. After adhesions have formed, there is danger that the disease will recur again and again upon very slight exposure, and there may result such defect of vision as to require operative interference in its behalf.

DR. TURNBULL observed that there was a form of exophthalmic goitre (Graves' disease, Morbus Basedowii) which, owing to the swelling and enlargement of the thyroid gland, is very apt to be confounded by those who seldom see the disease with bronchocele, and in which the prominent symptoms are, in the first stage, protruding eyeball, great palpitation and rapidity of heart's action. There is a staring look, which the late Von Graefe attributed to the fact that the upper lid does not quite follow the movement of the eyeball. This elevation of the upper lid is quite independent of the exophthalmos. The only peculiarity of this form of bronchocele is that the veins are generally much dilated. It is considered probable that the affection is due to irritation or neurosis of the sympathetic nerve, and the interrupted and continuous currents have been employed in its treatment. Virchow first called attention to the fact that if iodine is administered and the bronchocele disappears, marked acceleration of the pulse and palpitation of the heart may be observed. The proper treatment for this disease are the preparations of iron, digitalis, and quinine, together with nourishing diet, abundance of outdoor exercise, and freedom from care. A firm compression may also be applied, in the form of an ice-bag or cold-water compress. Von Graefe recommended in very severe cases partial tenotomy of the levator palpebræ superioris.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a meeting of the Pathological Society, held Thursday, February 23, 1871, John Ashhurst, Jr., M.D., in the chair,

DR. S. W. GROSS presented a large specimen of *proliferous cysto-sarcoma* of the breast, from a lady, forty-eight years of age, who first noticed it as a small "lump" fifteen years ago. It slowly increased in size up to a year ago, when it began to grow more rapidly, the growth having been most rapid during the past three months. The tumor was large, bulky, and heavy, and inconvenient for these reasons. It was freely movable on the subjacent parts; the nipple was natural; the subcutaneous veins were greatly enlarged; its consistence was uniformly firm and somewhat elastic, except towards its axillary margin, where there was an obscure sense of fluctuation, and the surface was tuberoid or lobulated. The skin at this point was adherent, discolored, and attenuated, but over the remainder of the mass it was free and of the natural tint. The patient enjoyed the best of health, and the axillary lymphatic glands were not involved.

The tumor, which was extirpated by Prof. Gross on the 23d of February, when cleared of fat was spherical in form, six inches in diameter, and weighed four pounds and a half. It was lobulated, contained in a well-defined capsule, and made up of cysts, which, varying in size from that of a small shot to that of a hen's egg, were proliferous,—first, with cysts with pellucid walls and fluid contents, attached for the most part by broad pedicles, and secondly, with solid fibrous masses, which had broad attachments, their free extremities presenting varied appearances, of which the most common were the lobulated, dendritic, fimbriated, and cauliflower. These vegetations almost entirely filled the parent cysts, there being but a thin layer of straw-colored fluid between their respective walls. Section of the tumor showed it to be succulent, and the main mass, as well as the vegetations, to be made up of a smooth, glistening, striated, yellowish-white tissue, with many points of firm, gelatiniform structure.

The microscope revealed fibrous tissue in various stages of transformation, and rich in spindle cells. Numerous sections of the solid intra-cystic growths disclosed the same elements, with the addition, at rare intervals, of patches of gland-structure. The translucent gelatinous masses were composed of spindle cells, with oil-globules and granular matter.

The specimen was referred to the Committee on Morbid Growths, who reported, on March 9, that they believed the cysts to have had their origin in dilatations of the milk-ducts. The rapidly proliferating connective tissue had thrown out papilliform projections into the ducts, which finally became large enough to occlude them, thus causing dilatation of the portion of the duct behind the obstructed portion, and the formation of a cyst. On these cysts secondary cysts have been formed in a similar manner.

DR. J. H. HUTCHINSON presented remarkable specimens of *hydatid cysts* of the *liver* and *hydatid cyst* from the connective tissue of the *pelvis*, removed from a Frenchman, aged thirty-two, who was admitted to the Pennsylvania Hospital, February 8, 1871, and died at noon of the 10th. He had observed slowly-increasing distention of his abdomen and lower part of his chest for several years, and four years ago he was suddenly seized with intense pain in the right chest, attended by dyspnœa and expectoration of a yellowish matter mingled with blood, so abundant as nearly to have suffocated him. During six weeks previous to admission he was confined to his bed, and complained of epigastric pain, with general abdominal tenderness and sense of weight in the lower belly. He had constant vomiting and diarrhœa, the stools occasionally containing blood.

The liver-dulness began at the fourth rib, and extended in the line of the nipple 5½ inches, in the axillary line 7 inches. To the left of the median line, and slightly below the ensiform cartilage, a projecting mass or nodule could be obscurely felt, about the size of a large egg. In the hypogastrium palpation indicated resistance, but no distinct tumor was detected. Some pain was present on pressure in the left portion of the hypogastrium. No œdema.

On *post-mortem* examination, the *heart* was found displaced slightly to the left and upward. The *right pleural* cavity was almost obliterated by old adhesions. The lung was lacerated in the dissection, and a large mass of blood-clots noted, but their origin was not discovered. The liver extended two inches below the arch of the ribs. It was greatly enlarged; the right lobe was adherent on its convexity to the diaphragm, and presented an immense whitish-yellow tumor, occupying the whole extent of the lobe, and substituting the hepatic tissue. This was fluctuating, and was found to be an

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immense hydatid cyst, of a capacity of three quarts, containing hundreds of "daughter cysts," varying from the size of a pea to that of a hen's egg. No distinct "granddaughter" cysts were found. On the anterior surface of the liver, at its middle, was a small, firm, nodular projection, about 2½ inches in diameter, and resembling exteriorly the large cyst. At the left edge of the left lobe was a thick yellow cicatrix. The gall-bladder was partially distended. The *kidneys* were albuminoid in places.

The *pelvis* was completely filled by a large, white, tense, thin-walled cyst, having no intimate connection with any organ, but springing from the connective tissue between the rectum and the prostate gland, pushing up and supporting as it were the bladder. It contained 3½ pints of amber-colored, slightly-turbid fluid, containing many echinococci. Chemical examination of the fluids of the cysts by Dr. Hare resulted as follows:

Cyst of Liver.—Alkaline; sp. gr., 1011; yellowish-white; turbid; highly albuminous; a small amount of chlorides; a small quantity of phosphates; a minute trace of carbonates; a large amount of fat; some cholesterine; no bile-acids; some biliary coloring matter. On treating deposit with boiling alcohol, round sac-like bodies present themselves.

Free Cyst.—Acid; 1008 sp. gr.; white; turbid; abundant chlorides; no phosphates; no carbonates; no albumen; no cholesterin; a little fat.

Microscopic examination by Dr. Richardson showed some increase in the connective tissue of the kidney. The liver was slightly fatty; its fibrous tissue somewhat increased.

In answer to the PRESIDENT, Dr. Hutchinson said he thought that there was no reason for supposing that the free abdominal cyst had escaped from the seat of the cicatrix in the lobe of the liver, but rather that the echinococci had reached this situation directly from the rectum. Dr. H. thought it was the only specimen ever presented to the society; certainly the only one positively known to have come from the Pennsylvania Hospital.

DR. C. B. NANCREDE referred to a degenerate hydatid cyst which had been presented for him by Dr. Mustin at a meeting of the society in the past year. The abundant presence of hooklets of the echinococci indicated its true nature.

DR. W. W. KEEN presented the *lower third of a tibia and fibula* from an *amputation* of the leg. The case was that of P. D, an Irishman, æt. 34, who fell from a street-car and was struck on the inner side of the right ankle by the wheel. The internal malleolus and the internal lateral ligament were exposed in the middle of a large flesh-wound, but no injury to the joint could be detected. Both bones were badly fractured above the joint, and the articulation was opened on the outside by a small perforation where the external malleolus was chipped and the astragalus could be felt. Amputation was decided upon, and was done, sixteen hours after the accident, by double flaps, utilizing the wound made by the accident.*

A point of further interest was revealed on cutting open the joint,—viz., there had been a *masked fracture* of the articular surface of the inner malleolus, similar to fracture of the internal table of the skull. Two fragments, involving half the thickness of the malleolus and about one-half of its surface, had been torn off by the strain on the internal lateral ligament, but from the exterior the fracture could never have been detected. Two fissures also existed externally in the articular surfaces of the tibia and the fibula. The difficulty in the diagnosis and the serious results that might follow so severe an accident can readily be imagined in those cases where no further injury required amputation.

The PRESIDENT referred to a paper in the sixth volume of the St. Bartholomew's Hospital Reports, in which Mr. Callender applied the term "*sprain-fracture*" to cases of sprain in which a small shell of bone was torn off with the ligamentous and tendinous structures attached to it,—an accident which Mr. C. regarded as of more frequent occurrence than was generally supposed, and which would amply account for the unsatisfactory results sometimes attained in the treatment of sprains. If Dr. Keen had given a correct explanation of the mechanism by which the fracture of the lower surface of the malleolus was in the present instance produced, this might be regarded as a case of "sprain-fracture," in which, but for other complications, the lesion in question would probably not have been recognized.

* The man has since recovered.

BIOLOGICAL AND MICROSCOPICAL SECTION, ACADEMY OF NATURAL SCIENCES.

AT a meeting of the Section, held Monday, February 6, the Director, S. W. Mitchell, M.D., in the chair,

MR. WM. H. WALMSLEY exhibited slides showing the difference between the torn edge of our ordinary paper and that of the thick, strong paper used by the Chinese for the manufacture of clothing. Both appeared to be composed of cotton, but the foreign article bore the aspect of being made directly from the cotton fibres instead of from comminuted woven fabrics.

DR. J. H. MCQUILLEN directed attention to the remarkable specimen of hypertrophy of the roots of a left superior first molar tooth, measuring 2½ inches in length by 2⅝ inches in circumference, and weighing 12½ pennyweights, which he had exhibited at a previous meeting, and of which he had promised to make a microscopic examination. This he had done, and now submitted the results under the microscope, in three sections, taken from the same locality, one under the other.

As he had anticipated, the growth proved to be hypertrophy of the cementum.

The term exostosis, frequently applied to this growth, was open to exception on account of the fact that there are certain characteristic differences between cementum and bone, which any one at all familiar with the microscopical anatomy of these two structures will readily recognize.

With the view of making this difference apparent to those unacquainted with the subject, he had placed under one of the microscopes a section of bone. This specimen shows a transverse section of the Haversian canals, with the lacunæ and canaliculi arranged around them in concentric lamina. In the cementum, on the contrary, there is an entire absence of the Haversian canals, while the lacunæ and canaliculi are quite numerous.

The three sections from the hypertrophied structure differed from each other in a somewhat remarkable manner, when we take into consideration the fact that they had been in such close contiguity. In the first, an outer section, the lacunæ and canaliculi are presented in the usual arrangement of cementum. In the second section, taken immediately adjacent and below it, there are, in addition to the lacunæ and canaliculi, a number of irregular spaces; while in the third section the lacunæ are largely increased, and the canaliculi are more numerous and increased in length, running in a spiral direction analogous to dentinal tubuli in secondary dentine.

DR. F. W. LEWIS inquired what difference there was between these exostoses and epulis.

DR. JAMES TYSON replied that, microscopically, true epulis is a fibrous tissue, but that the term is often erroneously applied to the so-called myeloid tumors of Paget (the giant-celled sarcoma of Virchow) which have a similar situation,—that is, any of the structures about the jaw-bone, periosteum, and fibrous mucous membrane,—and which are cellular, or contain at most a small amount of fibrous tissue. Dr. T. also suggested that it seemed at least more natural to place cementum and bone in the same category, since the former differed from true osseous tissue only in the absence of the Haversian canals, the object of which was merely to contain the minute blood-vessels, which were here unnecessary on account of the close contiguity of the structure (cementum) to its vascular supply.

DR. MCQUILLEN stated that the various characteristics of enamel, cementum, and bone had induced Prof. Owen and others to draw the distinction which he had mentioned.

DR. TYSON showed an ingenious gastric canula, improved by being fitted with a cover and catch, for preventing the loss of gastric juice by the animal scratching it open.

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REVIEWS AND BOOK NOTICES.

THE INTERMARRIAGE OF RELATIONS. From the Quarterly Journal of Psychological Medicine and Medical Jurisprudence, April, 1869.

PHYSICAL CULTURE IN AMHERST COLLEGE, 1869.

POPULATION: ITS LAW OF INCREASE. Read at the Meeting of the Western Social Science Association in Chicago, November 12, 1868.

THE PHYSIOLOGICAL LAWS OF HUMAN INCREASE. Extracted from the Transactions of the American Medical Association, 1870.

PHYSICAL DEGENERACY. Reprinted from the Journal of Psychological Medicine, October, 1870.

These pamphlets by Dr. Nathan Allen, of Lowell, Mass., except "Physical Culture in Amherst College," which is an historical account of the institution and exercises of the gymnasium, have for their chief object to substantiate what Dr. A. terms a Law of Increase of Population. We have read them carefully, and find they abound in good sense and sound conclusions.

We would ourselves prefer, however, to speak of the so-called "law" or "theory of increase," not as a law, but rather as a *condition*. That we may not be considered as representing unfairly, we will introduce the language in which he himself states it. Thus, in what may perhaps be considered as the representative paper,—that extracted from the Transactions of the American Medical Association,—on page 12, we have the following paragraph, which we present in its original form, though somewhat awkward in its expression: "Before proceeding further in the discussion, it may be well to re-state, in as few words as possible, what this law is. 'It is based upon a perfect development of all the organs in the human body, so that there shall be a perfect harmony in the performance of all their respective functions. It presupposes other conditions are favorable, such as the age, union, and adaptation of the married parties,—provided no laws of nature are violated or interfered with,—that there will uniformly be found, with such a standard of organization, not only the greatest number of children, but they will be found endowed with the highest amount of physical vigor, strength, and health.'" These are the terms of a condition and its results, not of a theory. His meaning, however, is easily reached, and, by a slight transposition of terms, it may be made the statement of a theory or proposition.

No thoughtful person can doubt for a moment that a perfect development of all the organs of the body and a harmony in the performance of all their functions are alone consistent with the largest number and most perfect development of offspring. Indeed, it would scarcely seem necessary to prove a proposition so patent. Dr. Allen has, however, thought proper to do so, in calling the attention of the profession to the subject; and he correctly deduces his arguments, directly and indirectly, from leading principles in physiology. Among these is the acknowledged principle that every organ, to secure its proper development and perform its appropriate functions, must have a due proportion of nutrition. Others are found in the laws of hereditary descent, negatively in the physiology of "sterility," "barrenness," etc., and in the fact that abnormal conditions of the body become less productive the farther we advance from a perfect standard.

Taking position against the intermarriage of relations, he justly bases it upon the physiological ground that defects of organization shared in by the blood of both parents are more apt to descend to offspring, and in an intensified degree; and though objecting on these grounds to the marriage of cousins, and, of course, of all nearer relatives, he does not deny that it is quite possible that a high degree of excellence in what he calls the "temperaments" in two cousins may be followed by offspring typical in health and development. On the other hand, marriage to a deceased wife's sister is properly said to be not only unobjectionable, but, for many reasons, desirable. It should, perhaps, be stated that Dr. A. does not use the word "temperament" to include a mixture or tempering of all qualities, physical and mental, but applies it more strictly to the different compartments of the body. Thus, the term *bilious or lymphatic temperament* is applied to the organs in the abdomen,—"the stomach, bowels, liver, and absorbents,"—as it were, geographically. In addition to the *bilious* or *lymphatic*, he makes also the *nervous*, the *sanguine*, and the *muscular* temperament. We confess to no partiality to such, or indeed to any, technical use of the term.

The evident diminution in the number of births, as shown by statistics, among native American women, he attributes partly to means taken to avoid conception and to intentional abortion, but principally to a deterioration in their organization, as the result of changes in education and domestic habits, in dress, and even occupation. We fear the former cause (avoidance of conception, etc.) has most to do with diminished fertility, but acknowledge also the force of the latter cause. Where is the American woman of modern times who will boldly inculcate in private circles, or, if she please, in public lectures, that "the strange and pernicious sentiment," as Dr. A. justly terms it, that there is some degradation attached to domestic labor, is false and pernicious, as it really is? Such a woman would alone be worthy to be the leader of fashion. A dissemination of these writings of Dr. Allen could result only in advantage to society.

CATALOGUE OF MEDICAL PORTRAITS.

We have received from Dr. W. H. Helm, of Sing Sing, N.Y., a number of specimen copies of photographs of eminent European medical men and savants.

Dr. H. deserves the thanks of the profession for the interest he has taken in having these prepared. Few gentlemen interested in the practice or literature of medicine are not anxious to add a familiarity with the faces of their favorite authors to that of the writings which they so highly value. From our ignorance of the originals, we are unable to speak of the accuracy of the likenesses, but are satisfied that every possible care has been taken to secure it.

The portraits, among many others, include those of Virchow, Niemeyer, Kölliker, Pettenkofer, Rokitansky, Hyrtl, Billroth, Brücke, Oppolzer, Milne-Edwards, Ricord, Trousseau, Velpeau, Duchenne, Larrey, Sappey, Sir Charles Lyell, Huxley, Sir William Fergusson, Todd, Toynbee, John Brown of Edinburgh, Sir James Y. Simpson, Christison, Robert Barnes, and Prof. Tyndall.

The photographs are for sale at the office of the *Medical and Surgical Reporter*, Philadelphia, by Lindsay & Blakiston, of Philadelphia, and by Wm. Wood & Co., of New York.

PHYSIOLOGICAL ACTION OF NITROUS OXIDE. By R. Amory, M.D. (Reprint from *N. Y. Medical Jour.*, August, 1870.) Jas. Campbell, Boston.

THE PHYSIOLOGICAL ACTION OF NITROUS OXIDE GAS. By J. J. Colton. S. S. White & Co., Philadelphia.

In the latter pamphlet, Mr. Colton advances and makes a feeble effort to prove the theory that nitrous oxide acts by producing increased oxidization of brain-tissue; while, in the former, Dr. Amory endeavors to demonstrate the very opposite of this,—namely, that the anæsthesia is owing to arrest of oxidization and capillary stasis. Evidently both of the gentlemen cannot hold the true view,—one at least must be wrong. The only proof at all worthy of consideration brought forward by Mr. Colton is stated upon page 8 of his pamphlet. It consists of three analyses of air, or three samples of expired breath. No. 1 was from a person who had not taken the gas; Nos. 2 and 3 were from one who was anæsthetized by it. It was found that Nos. 2 and 3 contained a very much larger percentage of carbonic acid. At a superficial glance this seems perhaps important testimony; but we assert that such experimentation amounts to nothing. The percentage of carbonic acid in exhaled air constantly varies, and there is, therefore, a very good chance that in a few experiments it might be found greater in the air expired during anæsthesia, even if the anæsthetic really lessened the amount of carbonic acid given off. Moreover, percentage gives in this case no measure of absolute quantity, as it is very possible that a much less bulk of air is expired in a minute during anæsthesia than during the same period of active life. On the other hand, Dr.

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Amory's experiments bear every mark of having been carefully and ably conducted,—are quite to the point, and sufficiently repeated to be authoritative; so that we must consider it fairly established that oxidization is checked during nitrous-oxide anæsthesia.

Dr. Amory, having shown that oxidization is checked, and rendered it probable that a certain amount of capillary stasis is produced, during anæsthesia from the gas, reasons that the former are the causes of the latter. Here, we think, he falls into the error of some of our modern reasoners on sleep. It is at least very possible that the anæsthesia is the cause rather than the result of the stasis. Anæsthesia and sleep mean cessation of function, and lowering of functional activity, of course, produces a partial arrest of circulation and oxidization. Some unpublished experiments that we have made prove that it is possible to arrest oxidization sufficiently to lower animal temperature eight or ten degrees in health without producing anæsthesia at all. We must therefore demur from accepting for the present Dr. Amory's conclusions, though we give high praise for the careful and ingenious experimentation.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Vol. xxi., pp. 612. Philadelphia, Printer, 1870.

The first part of this volume contains the minutes of the twenty-first annual meeting of the association, which was held at Washington, May 3, 1870. Many new questions, arising from the social and political changes of the past few years, presented themselves for settlement, and it was feared that the meeting might be of a less harmonious character than usual. Fortunately, however, the discussion of most of these questions was avoided, and the feeling of good fellowship which should prevail at the sessions of a scientific association was not materially disturbed. Of the different sections, that of anatomy and surgery appears to have been the most active; and it is only necessary to mention that Drs. Gross, Gurdon Buck, and Sayre read papers, to demonstrate that the proceedings must have been of a very interesting nature. The papers of these gentlemen, as well as those of some others, are of decided value, and it is to be deplored that these "Transactions" have so limited a circulation. Dr. J. G. Richardson read a paper "On the Cellular Structure of the Red Blood Corpuscle" before the Section on Medical Jurisprudence, Hygiene, and Physiology, which was noticed at length in No. 10 of this Journal. The report of the committee appointed to memorialize Congress on the cultivation of the cinchona-tree in the United States, and the report on the propriety of establishing a cinchona-plantation in the United States, by Thomas Antisell, M.D., both satisfactorily prove that certain portions of the State of California are admirably adapted for the cultivation of the cinchona-tree. It is rather a curious fact, although one which we believe is also true of some other drugs, that the bark of the cultivated tree yields in many cases a larger percentage of quinia than that of the uncultivated. The Committee on Prize Essays awarded the prize to Dr. Benjamin Howard, of New York, late Professor of Clinical and Operative Surgery, Long Island Medical College, for "An Essay on the Treatment of Aneurism." The treatment which he recommends is that which seemed to him to be indicated by the results of numerous experiments made upon sheep, and consists in the application of a silver ligature to the artery above the aneurism, but the ligature is only to be drawn sufficiently tightly to diminish the arterial current, not to arrest it entirely. He believes he has demonstrated that, by *slowing* the circulation in the aneurism, fibrin is gradually deposited upon the sides of the sac, and in this way a much firmer and more permanent clot is formed than when the ligature is applied in the more usual way.

BOOKS AND PAMPHLETS RECEIVED.

Catalogue of the University at Lewisburg.

Third Annual Report of the St. Mary's Hospital.

The Health and Wealth of the City of Wheeling; also, General Remarks on the Natural Resources of West Virginia. By James E. Reeves, M.D. Second edition, enlarged and illustrated. Pamphlet, 8vo, pp. 157. Baltimore, Law Book and Job Office, 1871.

New York State Inebriate Asylum, Binghamton, N.Y. Annual Report of the Superintendent and Physician for the Year 1870. Pamphlet, 8vo, pp. 39. Albany, Van Benthuysen Printing-House, 1871.

Prostitution and its Sanitary Management. By Edmund Andrews, M.D. Pamphlet, 8vo, pp. 33. From the *Chicago Medical Examiner*, February, 1871.

Address delivered before the American Academy of Dental Science at their Annual Meeting. By J. H. Foster, M.D. Boston, Rockwell & Churchill, 1871.

Catarrhal and Croupous Inflammation of Mucous Membranes. By Samuel G. Armor, M.D. Pamphlet, 8vo, pp. 12. Reprinted from the *New York Med. Journal*, February, 1871.

On Dactylitis Syphilitica, with Observations on Syphilitic Lesions of the Joints. By R. W. Taylor, M.D. Pamphlet, 8vo, pp. 30. Reprinted from the *American Journal of Syphilography and Dermatology* for January, 1871.

Second Annual Report of the State Board of Health of Massachusetts, January, 1871. Boston, Wright & Porter, 1871.

Code of Health of the School of Salernum. Translated into English Verse, with an Introduction, Notes, and Appendix. By John Ordronaux, LL.D., M.D., etc. 12mo, pp. 167. Philadelphia, J. B. Lippincott & Co., 1871.

GLEANINGS FROM OUR EXCHANGES.

CHLORALUM.—Dr. Edward Ballard, Medical Officer of Health for Islington (*Chem. News*, January 20, 1871), protests against the assertion made by Professor Gamgee, that carbolic acid, owing to its smell, is less used than it would be if without odor, and recommends caution in accepting chloralum as a disinfectant. In his own experience he has found carbolic acid "a most efficient agent for destroying contagia," and that its odor is not offensive unless contaminated with sulphide of ammonium.

He objects to the inference that because chloralum is *antiseptic* it is also a *disinfectant*, and against Prof. Gamgee's assuming its disinfecting power from its chemical properties as an antiseptic. A disinfectant, he says, is an agent which will destroy the vitality—the power of growth and reproduction—of those minute particles of matter which, given off by the sick, are capable of producing a like disease in the healthy. He thinks that to prove that any substance is a disinfectant, it should be shown, by experiment by an accomplished microscopist, to have the power of destroying the vital manifestations of those minute amœbiform particles of matter which constitute the simplest form of living things, and, by repeated experiment upon a large scale, that the use of the reputed disinfectant actually has resulted in the arrest of the spread of contagious disease. He is of opinion that Prof. Gamgee has advanced nothing to satisfy any one that chloralum, used in any way, is capable of destroying the peculiar manifestations of a morbid contagion, and thinks that the reason for its rapid strides into the favor of medical men (who are apt to take up new disinfectants in a "wild manner") may be found in that freedom from odor which Prof. Gamgee considers the basis on which the reputation of Condy's fluids rests.

Dr. Ballard gives as a reason for not having tried chloralum himself, though smallpox and scarlet fever are raging in his district, that he dare not assume the responsibility of its use until *primâ facie* proof at least is afforded him that by using it he will be using that which is capable of destroying "disease-germs."

In the same journal (January 27, 1871), Prof. Gamgee expresses his high appreciation of the value of the suggestions made by Dr. Ballard with regard to means for investigating and proving the mode of action of substances offered as disinfectants, but thinks that little would be learned experimentally

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about any of them if all persons who, like Dr. Ballard, have abundant opportunity of testing the matter, waited instead of acting.

He states that chloralum shrivels, arrests the movements of, and kills the amœbiform bodies above referred to,—and does more. It destroys many of the lower forms of parasitic life, whether animal or vegetable. He is convinced that every good antiseptic is really a destroyer of disease-germs. He adds that the properties of chloralum are almost identical with the active antiseptic and disinfectant properties of hydrochloric acid.

The Wandering Liver in its Correlative Relations to Pregnancy, Birth, and Childbed (*Meissner, Archiv. für Gynaecologie*, vol. i. p. 188).—The author was summoned in April, 1869, to a patient who had suffered for a long time with symptoms of abdominal disturbance. She was thirty years old, and stated that after the birth of her last child, in January, 1869, the abdomen had remained enlarged, while she complained of an uncomfortable feeling of pressure, weight, and fulness on the right side, and an inability to stoop forward, as she had been in the habit of doing before confinement, in the pursuit of her occupation. The tumor, owing to its peculiar shape, was at once recognized as the prolapsed liver, and reposition was easily effected. A suitable mode of fastening the undergarments, and the use of an elastic abdominal bandage, supported the organ in its normal position so satisfactorily that the tumor at evening was never found lower than the inferior border of the ribs on the right side.

Cantani, of Padua, described a similar case in 1866, which he subjected to a critical examination, and at the same time offered a suggestion as regards its etiology, to which Meissner cannot give his assent. Cantani's case also followed pregnancy, and he thought that the enlarged uterus, by pushing the liver backwards, had excited some slight inflammation in the peritoneal folds, which had thereby become soft and distensible, so that they had subsequently yielded to the weight of the liver after the uterus had contracted.

This explanation M. rejects, on these grounds:

1. Notwithstanding the frequency of pregnancy, this condition is exceedingly rare, and has, in fact, never been the subject of post-mortem examination.

2. The inflammation of serous membranes does not result in softening and distensibility, but in the production of adhesions and pseudo-membranes.

3. According to the anatomical relation of the parts, the liver would not be pushed backwards, but forwards, by the development of the uterus.

4. Such a pressure on the liver would inevitably produce serious symptoms; while in point of fact the general health of the patients in both cases was scarcely impaired.

Meissner supposes that this unusual mobility of the liver is produced by a "mesohepar,"—viz., a fold of the peritoneum which encircles to a great extent the liver, again uniting at the diaphragm,—but that this development of the peritoneal covering is not due to a pathological process, but to a congenital excess of development. This, then, explains satisfactorily all the symptoms.

Function of the Prostate Gland.—Dr. Kraus, editor of the Vienna *Medical Times*, contributed to the *Med. Times and Gazette*, February 11, 1871, a preliminary communication in regard to the seminal fluid and the influence of the prostatic secretion on its physical qualities. The conclusions arrived at are—1. The seminal fluid, as long as it remains within the testes, vesicles, and other seminal passages, is colorless and scentless, being in appearance exactly like fresh honey while deposited in the comb; and in its reactions it is neutral. 2. Only when it has quitted the passages and arrived in the urethra does it acquire its white color and its peculiar faint smell. 3. During its passage through the prostatic portion of the urethra, the prostate empties out its fluid, colors the semen white, and confers upon it the faculty of coagulating when exposed to the air (alkaline reaction). Semen taken from the seminal vesicles does not coagulate, but remains clear, colorless, and scentless. 4. The spermatozoids, in the absence of the prostatic fluid, cannot live in the mucous membrane of the uterus of mammalia; but with its aid they may live for a long time in the uterine mucus, often more than thirty-six hours. From his experiments, which are not yet published, he draws the conclusion that the prostatic fluid exercises an unlimited influence on the viability of the spermatozoids, sustaining it when endangered by the mucus secreted by the mucous membrane of the uterus.

The Production of Hemorrhage, Anæmia, etc. in the Lungs by Injuries to the Base of the Brain.—Dr. Brown-Séquard contributes to the London *Lancet*, January 7, 1871, some experimental researches on guinea-pigs, rabbits, and cats, to show how frequently the lungs are altered consecutively to a lesion of the brain. He states that in almost all cases of injuries by crushing or section of the pons varolii, ecchymoses were found in the lungs; sometimes the whole lung was crowded with effused blood, and real pulmonary apoplexy existed. Injuries to other portions of the brain were attended with similar results, but they rarely followed injuries to the medulla oblongata and spinal cord, although the nerve-fibres going from the pons varolii to the lung pass through both of these divisions of the nervous system. Experiments show that it is not through the par vagum, but the sympathetic, especially by its spinal roots, that the peculiar influence of the irritated pons varolii exerts itself in producing pulmonary hemorrhage. The condition of the lung, as regards distention or collapse of the air-cells, does not materially change the effect. A lesion in one of the lateral halves of the pons produces generally a much greater effect on the lung of the opposite side. Anæmia may also be produced after similar injuries of the base of the brain, but especially of the pons varolii, some parts of the lung seeming to be absolutely deprived of blood. Œdema appears principally after injury of the medulla oblongata, the lung presenting several minute grayish spots containing serum, and the minute blood-vessels being filled with the white corpuscles of blood, and free from red corpuscles. This change in the contents of the pulmonary capillaries is immediate. Emphysema, Dr. Brown-Séquard declares, can appear when not a single respiratory movement takes place, after an irritation of the base of the brain, either by crushing or cutting. This differs from the views of other observers on the mode of production of emphysema. He also states that of 188 cases of organic disease of the brain recorded in the work of Calmeil, there was a morbid state of the lungs in more than 60 cases. He concludes that many patients attacked with brain-diseases die from disease of the lungs caused by that of the central organ of the nervous system.

Removal of a Horse-Shoe Pessary from the Bladder.—Dr. Levin J. Woolen (*American Practitioner*, Dec. 1870, p. 335) reports a case in which an open horse-shoe pessary was introduced by a physician into the bladder. In order to remove it, he was obliged to divide the urethra from a point half an inch behind the meatus, extending the incision up to the neck of the bladder. The pessary was readily removed, but the wound in the bladder failed to close, despite two subsequent operations. The above is the fifth recorded case of introduction of the open-lever pessary into the bladder,—Dr. H. R. Storer having reported two, Drs. T. O. Edwards and Byford each one.

Effect of Inhalation of Oxygen upon the Pulse.—Dr. Andrew H. Smith recently read a paper on this subject before the N. Y. Medical Journal Association (*Medical Record*, Jan. 2, 1871, p. 481), giving interesting results of experiments with oxygen, eight gallons of which, on the average, were administered to each person. The conclusion arrived at was that this gas is an arterial, or, more correctly, a cardiac, sedative; the first step being a change in the blood, which facilitates its circulation and thus lessens the labor imposed upon the heart. In 102 observations made upon 11 phthisical patients, the pulse was retarded an average of 10 beats per minute in 72 of these, was unchanged in frequency in 18, and slightly accelerated in 12. In 12 healthy individuals selected for experiment, in 8 there was an average fall of 9 beats, while in the other 4 there was no change. The sphygmograph indicated a change also in the character of the beat,—the volume of the pulse being increased, probably on account of a greater time being afforded, by the retardation of the pulse, for the ventricles to become filled with blood, and an increased amount of blood being thus thrown into the arteries. An

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antagonistic effect of the gas upon the volume of the pulse is found in the fact that it acts upon the blood in such a way as to facilitate its flow through the capillaries, and, as one or the other effect predominates, the pulse becomes increased or diminished in size, or, if they are exactly apportioned to each other, no change of volume results. Under the use of oxygen, dicrotism of the pulse was usually lessened, owing to the diminution of capillary resistance, and irregularity of the beat was generally overcome, at least temporarily.

TUBERCULOSIS AND CANCER (*The Lancet*, July 16, 1870).—The correlation of these diseases has been, for some time, the object of anxious thought on the part of medical men. Facts have so distinctly obtruded themselves on the attention of observers, that the mere collection of cases will go far to establish a relationship between tuberculosis and cancer. Among the most intelligent physicians who have clinically studied the subject is Dr. Burdell, of Vierzon, in France. On the 17th of May last, he read a paper before the Academy of Medicine, of Paris, in which it is stated that the diseases have been observed in more than one hundred families, both by the author and his father, to whose practice he has succeeded. It was found that parents affected with cancer had children who presented the tubercular diathesis. Dr. Burdell's memoir is remarkable, not only for the care with which the statistics were collected, but also for the sober manner in which theorizing is attempted. The facts speak so forcibly, that the profession cannot fail to be struck by them. It would be well if one of our societies would, next winter, appoint a committee to receive reports from medical men, all over the country, respecting their experience on this important subject.

OSSIFIC DEPOSIT IN THE EYEBALL.—Mr. Spencer Watson exhibited before the Pathological Society of London (*Med. Times and Gaz.*, Dec. 31, 1870) two specimens of ossific deposit in the eyeball. One occurred in the eye of a man, aged 30, whose eye had been destroyed long before, but had not been removed. Sympathetic ophthalmia made its appearance, and the diseased eyeball was then taken away; there was a bony deposit in the choroid; the lens was calcareous, and there was a deposit in the cornea. In the second, removed for the same cause, there was a slight deposit in the choroid, round the entrance of the optic nerve. Dr. Careton, of Norwich, Conn., reports (*Proceedings of Amer. Med. Association* for 1870) the case of a man who for six years had suffered from an obscure affection of the right eye, with loss of sight. On account of sympathetic trouble in the other organ, the right eye was removed, and there was found between the choroid and retina a large, irregular, cup-shaped formation of bone, in which there was an opening hardly large enough for the passage of the optic nerve. The capsule of the lens was also ossified.

MISCELLANY.

RESIGNATION AND APPOINTMENT.—Prof. Alfred Stillé having resigned the position of Attending-Physician to the St. Joseph's Hospital, Dr. James Tyson was chosen, March 21, to succeed him. Drs. J. G. Richardson and A. H. Fish were also candidates for the position.

ANNUAL COMMENCEMENTS.—The two great medical schools of this city held their annual commencements,—the Jefferson College on March 13, with 127 graduates, the University of Pennsylvania on the 14th, with 114.

The alumni associations, formed last year, held their annual meetings; besides which each of them celebrated the occasion by an entertainment,—that of the University being held in the hall of the Department of Arts, and that of the Jefferson College at Augustin's, in Walnut Street.

The officers of the Alumni Association of the Medical Department of the University are:

President, Dr. George B. Wood; Vice-Presidents, Drs. J. Carson, S. H. Dickson, G. W. Norris, and Wilmer Worthington; Corresponding Secretary, Dr. C. T. Hunter; Recording Secretary, Dr. H. Y. Evans; Treasurer, Prof. R. E. Rogers.

The officers of the Alumni Association of the Jefferson College are:

President, Dr. S. D. Gross; Vice-Presidents, Drs. N. L. Hatfield, Washington L. Atlee, Ellwood Wilson, and Addinell Hewson; Recording Secretary, Dr. J. E. Mears; Corresponding Secretary, Dr. R. J. Dunglison; Treasurer, Prof. B. Howard Rand.

THE ALUMNI ASSOCIATION OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.—We have been requested to call attention to the following:

"The Executive Committee of the Alumni Association of the Medical Department of the University of the City of New York purpose the publication, at the earliest possible date, of a complete catalogue of the graduates from that institution since its foundation. The records of the Faculty having been destroyed in the burning of the college building some years ago, this project is one that should be seconded by every one of the alumni, of whom between two and three thousand are scattered throughout the United States. It is earnestly requested that each of these will without delay forward for enrolment his full name and post-office address, with his professional history, including date of graduation, posts of honor and trust held, etc., and also any information which he may possess concerning former class-mates who have since died or retired from practice. Communications should be addressed to the Secretary, Charles Inslee Pardee, M.D., 72 West 35th St., New York."

UNIVERSITY HOSPITAL.—At the recent annual meeting of the Alumni Association of the Medical Department of the University of Pennsylvania, a resolution was brought forward by Dr. W. F. Norris, and received with marked favor, bespeaking the interest of the members for the project of a hospital, to be connected with the institution; the object being, of course, to facilitate and extend the clinical instruction afforded the classes attending the school.

It would be difficult to overestimate the advantage which would accrue from the efficient carrying out of this plan, and we sincerely hope that the Trustees will find means to accomplish its fulfilment.

WISE LEGISLATION.—A bill was recently passed by the New York Legislature providing for the appointment of a paid board, consisting of six members,—viz., two skilled pharmaceutists, two skilled druggists, and two regular physicians,—for the examination of all persons now employed or hereafter to be employed as clerks by persons engaged in preparing, putting up, and dispensing medicines in the city of New York. Unless licensed by the board, it is unlawful for any one to put up prescriptions.

The punishment for employing unlicensed clerks is a fine of not less than $500, or imprisonment for six months, or both, at the discretion of the court.

PRESBYTERIAN HOSPITAL.—The religious denomination of Presbyterians in Philadelphia are arranging for the erection of a hospital. Patients will be admitted as in other sectarian institutions of the kind. A lot of ground situated in West Philadelphia has been given as a site, and we believe funds are being collected with a view to the early commencement of the work.

THE STRANGERS' HOSPITAL.—This institution, lately established in New York by the generosity of Mr. John H. Keyser, is situated at the corner of Tenth Street and Avenue D. It

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will contain one hundred and eighty beds, of which more than one-half will be free. It is intended as a substitute for the New York City Hospital, recently torn down. Upon the list of officers we notice the names of several of the staff of the old institution.

THE TITLE OF "DOCTOR."—The New York *Medical Gazette* gives the following, taken from one of its exchanges:

"The title of 'doctor' was invented in the twelfth century. Irnerius, a learned professor of law at the University of Bologna, induced the Emperor Lothaire II., whose chancellor he was, to create the title, and he himself was the first recipient of it. He was made doctor of laws by that university. Subsequently the title was borrowed by the faculty of theology, and first conferred by the University of Paris on Peter Lombard. William Gordenio was the first person upon whom the title of doctor of medicine was bestowed; he received it from the College of Asti, in 1329."

NATURE'S ECONOMY.—Prof. Huxley, in a recent lecture, gives the following curious and striking view of a geological process:

"Let us suppose that one of the stupid, salamander-like labyrinthodonts, which pottered, with much belly and little leg, like Falstaff in his old age, among the coal forests, could have had thinking-power enough in his small brain to reflect on the showers of spores which kept on falling through years and centuries, of which perhaps not one in ten million fulfilled its apparent purpose and reproduced the organism which gave it birth: surely he might have been excused for moralizing upon the thoughtless and wanton extravagance which Nature displayed in her operations. But we have the advantage over our shovel-headed predecessor,—or possibly ancestor,—and can perceive that a certain vein of thrift runs through this apparent prodigality. Nature is never in a hurry, and seems to have had always before her eyes the adage, 'Keep a thing long enough, and you will find a use for it.' She has kept her beds of coal many millions of years without being able to find much use for them; she has sent them down beneath the sea, and the sea-beasts could make nothing of them; she has raised them up into dry land, and laid the black veins bare, and still, for ages and ages, there was no living thing on the face of the earth that could see any sort of value in them; and it was only the other day, so to speak, that she turned a new creature out of her workshop, who, by degrees, acquired sufficient wits to make a fire, and then to discover that the black rock would burn."

After alluding to the value of coal to the arts as a fuel, he goes on:

"All this abundant wealth of money and of vivid life is Nature's interest upon her investment in club-mosses and the like, so long ago. But what becomes of the coal which is burnt in yielding this interest? Heat comes out of it; light comes out of it; and if we could gather together all that goes up the chimney and all that remains in the grate of a thoroughly-burnt coal-fire, we should find ourselves in possession of a quantity of carbonic acid, water, ammonia, and mineral matters exactly equal in weight to the coal. But these are the very matters with which Nature supplied the club-mosses which made the coal. She is paid back principal and interest at the same time; and she straightway invests the carbonic acid, the water, and the ammonia in new forms of life, feeding with them the plants that now live. Thrifty Nature! Surely no prodigal, but most notable of housekeepers!"

THE INTERNATIONAL MEDICAL CONGRESS.—From the following item, which we clip from the *British Medical Journal* of February 11, it would seem as if the German element would rather predominate in this body:

"The committee charged with the arrangements for the International Medical Congress, which it is proposed to hold in Vienna in the course of the present year, has made the following nominations of officers, etc.: President, Prof. Rokitansky; Vice-Presidents, Profs. Duchek and Sigmund; Secretaries, Drs. Benedikt and Schnitzler; other members of committee, Drs. Oppolzer, Kraus, Pichler, Scott, Wertheim, and Wittelshöfer."

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the returns made to the Health Office:

Interments for the week ending March 11, 1871 310

Adults, 156
Minors, 154

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 58)	103
Diseases of Brain and Nervous System	48
Debility, 9; Marasmus, 6; Old Age, 13; Inanition, 9	37
Zymotic Diseases	30
Diseases of Abdominal Organs	31
Diseases of Organs of Circulation	16
Stillborn	17
Casualties, 4; Suicide, 1	5
Cancer, 5; Syphilis, 1	6
Unclassifiable	17
	310

Interments for the week ending March 18, 1871 238

Adults, 135
Minors, 103

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 48)	84
Diseases of Brain and Nervous System	29
Debility, 15; Marasmus, 8; Old Age, 9; Inanition, 3	35
Zymotic Diseases	22
Diseases of Abdominal Organs	22
Diseases of Organs of Circulation	11
Stillborn	12
Casualties, 3; Suicide, 2; Murder, 1	6
Cancer, 3; Scrofula, 2	5
Unclassifiable, 10; Unknown, 2	12
	238

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 5, 1871, TO MARCH 18, 1871, INCLUSIVE.

MILLS, MADISON, SURGEON.—By S. O. 103, War Department, A.G.O., March 14, 1871, to report to the Commanding General Department of the East for assignment to duty.

HAMMOND, J. F., SURGEON.—By S. O. 47, Headquarters Department of Texas, March 6, 1871, assigned to duty as Post-Surgeon at Fort Richardson, Texas.

SMITH, J. R., SURGEON.—By S. O. 107, War Department, A. G. O., March 17, 1871, relieved at Jefferson Barracks, Mo., and assigned to duty as Post-Surgeon at Fort Wayne, Mich.

IRWIN, B. J. D., SURGEON.—By S. O. 107, War Department, A. G. O., March 17, 1871, upon being relieved at Fort Wayne, Mich., to report in person to the Commanding Officer Department of the Missouri for assignment to duty.

WEEDS, J. F., SURGEON.—By S. O. 45, Headquarters Department of the South, March 4, 1871, to accompany detachment of recruits from Nashville, Tenn., to Indianola, Texas, and after completion of this duty to return to his station, Nashville, Tenn.

HARTSUFF, A., ASSISTANT-SURGEON.—By S. O. 29, Headquarters Department of the Columbia, February 25, 1871, upon being relieved at Sitka, Alaska Territory, to report in person at these Headquarters for assignment.

PHILLIPS, H. J., ASSISTANT-SURGEON.—By S. O. 29, Headquarters Department of the Columbia, February 25, 1871, assigned to duty at Sitka, Alaska Territory.

O'REILLY, R. M., ASSISTANT-SURGEON.—By S. O. 40, Headquarters Department of the Platte, assigned to duty as Post-Surgeon at Fort Laramie, Wyoming Territory, upon being relieved at Sidney Barracks, Nebraska.

HEIZMANN, C. L., ASSISTANT-SURGEON.—By S. O. 40, Headquarters Department of the Platte, March 10, 1871, to accompany Fourth Infantry from Fort Laramie, Wyoming Territory, to Sidney Barracks, Nebraska, and, on arrival, report for duty as Post-Surgeon at that post.

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SATURDAY, APRIL 15, 1871.

ORIGINAL LECTURES.

TWO CLINICAL LECTURES

ON CASES OF UNUSUAL VASCULAR MURMURS WITHIN THE CHEST.

BY ALFRED STILLÉ, M.D.,

Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital, etc.

LECTURE I.

I PROPOSE, gentlemen, to-day, and at the next lecture, to occupy your time with the consideration of two cases which are of somewhat difficult diagnosis. In this connection it is perhaps well for me to state once more what are the objects, and what the means of obtaining them, which are presented by clinical medicine as it is taught in this hospital during the winter term.

The subjects of clinical lectures are the diagnosis and the treatment of disease. Correct diagnosis is absolutely essential to successful treatment, since unless a disease is recognized, it is impossible to treat it intelligently. In acute diseases, let them be fevers or inflammations,—and these constitute the greater number,—the diagnosis is comparatively easy. It rests upon some one, two, or three phenomena, which are readily seized, and, in fact, can hardly escape observation. Thus, in the diagnosis of scarlet fever you have the duration of the prodromes, the date and characters of the eruption, and so on, all occurring in a regular order, and each symptom always presenting more or less the same aspect. In other words, upon the patient may be said to be written the name of his disease. The same is true of all other acute affections, even those which we have to investigate by physical methods. Their nature may be discovered just as readily; for example, no sooner do we find a crepitant rhonchus at the commencement of an acute disease of the lung than we know this organ is affected with pneumonia. Acute diseases are all so plainly indicated that "he who runs may read" them. Therefore their diagnosis is comparatively easy, and hardly enters into the instruction in clinical medicine as we are giving it here.

There is another reason why the diagnosis of acute diseases does not come before us under existing circumstances. We meet but once a week. It would therefore be impossible for us to observe the course and phases of such affections. They may change from hour to hour, and certainly will from day to day; of what use, therefore, would it be for me to exhibit to you diseases whose phenomena are so transient? Moreover, the danger of bringing persons affected with acute disease so far from the wards into a different atmosphere, and with all the excitements of a clinical demonstration around them, is so great that I am unwilling to expose my patients to it. Clinical teaching of acute diseases can be conducted only in the literal sense,—that is, when it is *bedside* instruction. The Germans have a very appropriate term for such clinical instruction as the present. They call a lecture-room of this sort an "ambulatorium,"—that is, its patients consist of those who are able to walk about.

To these remarks I will add another, which is that, although we have not, during your winter term, the opportunity of investigating acute diseases, of making their diagnosis, of watching their diurnal revolutions, of noting their duration and all the phenomena that accompany them from stage to stage, yet we have the facilities for doing that which, individually, we cannot quite so well do at the bedside as we can do here. In the investigation of chronic diseases some of the most difficult problems occur which it is possible for the physician to have placed before him. You have every facility of making such investigations. You have the result of the previous study by the lecturer before the patient is brought before you; you have the opportunity of seeing the patient thoroughly; and many of you are also enabled to verify the statements made by your teacher. All this gives this plan a certain advantage over any other mode of teaching.

The cases to which this method of instruction is most appropriate are chronic; and the peculiarity of chronic diseases, of whatever name, is this, that their phenomena are more or less irregular and uncertain. In acute disease, from the beginning you are able to determine, with a good deal of accuracy, that on such a day a certain change will take place, that on such another day another change will occur, and, on the average, at the expiration of a certain time the patient will be well, or a fatal termination will have occurred. But chronic diseases offer little of this regularity. They have no definite commencement, duration, or termination. You see, then, how difficult, on these grounds alone, the diagnosis of chronic diseases may become. More than that, chronic diseases in their commencement, and from the fact that they are chronic and run a long course, do not usually at first disturb the functions of the economy, and therefore they do not give rise to definite symptoms. Consequently, it is quite possible that a patient may have a very serious chronic disease of which he himself is unconscious, and of which the physician may not be aware unless his attention is directed specifically to it.

In the case that I am about to present to you, and in another case which I shall introduce at our next meeting, very interesting and perhaps very important phenomena have been discovered, which would have passed entirely unnoticed unless a thorough and systematic observation of the patient had been made.

CASE I. *History.*—George Stephens, æt. 69, white, a native of Philadelphia, admitted to the Philadelphia Hospital, December 3, 1870. His habits of life have been moderately proper and temperate. His nose is partially destroyed, possibly, as he states, by the shot of an Indian arrow in the Florida war, 1837. He has also had a large portion of his hard palate destroyed, and there are extensive cicatrices on the posterior wall of the pharynx, and the posterior half-arches are deformed and bound to it. He owns to having had a bubo forty years ago, and waxen kernels remain in the right groin. There are no nodes on the body at present, nor any recent syphilitic manifestations. He states that in 1865 he was exposed to wet and cold, after which his legs became stiff and painful, but he does not know whether the joints were affected or not. His feet have been more or less swollen at different times within the last three or four years.

Present condition.—His complexion is dirty; muscular development good; no emaciation; feet and legs œdematous and firm, and over the surface of them are several circular, dead-white cicatrices; skin quite normal to the touch; muscles of the extremities stiff and slightly painful on motion; hearing impaired, having suddenly become so after exposure to wet and cold thirty years ago; sense of smell entirely gone; that of taste nearly so. His appetite is good; tongue large, red, and moist; abdomen distended and resonant. Hepatic dulness extends from the sixth intercostal space to a point slightly within the margin of the ribs on the side, and an inch below the ribs in front. Spleen normal in size. Bowels regular. Respirations sixteen to the minute; no pain in the chest; no cough; development of chest good; percussion for the most part clear; breathing-sounds in general soft, but rather feeble.

The impulse of the heart is feebly felt; its movements are regular; percussion-dulness not increased,—at least not to the

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left nor vertically. All the heart-sounds are normal at their usual points of greatest intensity. Below the right nipple can be heard the first and second heart-sounds, which are normal but distant; on approaching the sternum these sounds become louder, but are evidently of the same origin. Above and within the right nipple, an inch in each direction, there is a loud, blowing, slightly rough murmur, synchronous with the systole of the heart, which is much fainter on advancing towards the sternum, where it is scarcely heard. There is diminished resonance on percussion over a space of two inches in diameter, where this murmur is most intense, and in this space the respiratory sounds are but faintly audible. No heart-sounds are heard in the back. Pulse, 66,—full and strong; the radial artery feels firm, but not calcareous. There is no murmur in the arteries at the base of the neck, nor any venous pulsation at this place. The urine is normal in quantity, acid, contains no albumen, and has a specific gravity of 1020.

December 14.—The breathing-sounds are alike on both sides of the chest. The right side of the chest is slightly flattened in front, and the movements and percussion-resonance are in the same degree diminished. The superficial veins on the right side of the chest are prominent. There is no visible or palpable epigastric pulsation. The pulsation of the femoral arteries is normal. The pupils are of equal size.

December 16.—The patient can lie equally well on either side, and is not short of breath. There is greater fulness and greater pulsation of the vessels above the right clavicle than of those above the left. The murmur to-day is heard most distinctly between the third and fourth ribs, on a line one inch within the nipple. When the man exerts himself there is another—a systolic apex-murmur—generated, and this is transmitted slightly towards the left axilla.

December 30.—Pulse, 52, and regular. He has nausea, but no vomiting, and pain and some tenderness in the epigastric region. Throughout almost the whole of the epigastric and umbilical regions a sense of resistance to pressure is detected, the percussion-resonance is diminished, and a distinct pulsation is felt. On ausculting this space a shock is communicated to the ear, and a sound like the cardiac first sound is heard. This sound is heard to the level of the liver, above which it becomes associated with the rough blowing murmur previously described.

January 27.—During the last month he has become rather stouter, and neither murmur nor pulsation can now be detected in the abdomen. The liver appears to extend about an inch below the edge of the chest, on the line of the right nipple.

What, then, are the points in the history of this case which will tend to lead us towards a correct rationale of the murmur which is heard on the right side of the chest? In the first place, you have a history of a rheumatic seizure, which indeed was preceded by—and, according to the judgment of Dr. Hand, the resident physician who took these notes, indicated the presence of—syphilitic disease, which, however, has been entirely cured. One thing is very certain, that, as there has been no active sign of syphilis for more than thirty years, we may exclude the idea of a syphilitic element in the disease of recent occurrence.

Leaving, then, this question of syphilis out of sight altogether, the most striking external phenomenon that remains in the case is the swelling of the legs. You have heard the peculiarity of this swelling described. It is very marked. The skin is hard; it is with very great difficulty indented by pressure. Now, œdema, when it is acute, sometimes assumes this character; when, however, it is chronic, it is not apt to do so. There is nothing, so far as I am aware, in the mere hardness of the integument in which the œdema exists to indicate the cause of that œdema. The swelling of the leg, you observe, is not sufficient to alter the usual form and proportions of the limb. The ankle and calf of the leg have their natural shape. There is, however, œdema, which, as you have heard, came on some years ago, soon after the man had caught cold by exposure. Whether or not he had rheumatism at this time is doubtful, because his intelligence is not very acute, and, moreover, he is very deaf, and it is not easy to communicate with him.

This swelling of the legs, however,—and a swelling which, from its history, had evidently been of long duration,—necessarily suggested the suspicion that the heart was the seat of some lesion of an obstructive kind, because obstructive disease of the heart gives rise to dropsy, which nearly always begins in the feet first; on the other hand, dropsy which begins in the face is nearly always associated with kidney disease. Now, it is quite possible that you may have both of these diseases together; but where they do occur, together in the great majority of cases, the heart is first diseased, and therefore the feet are the first to swell. In our case there is no suspicion of kidney disease; the urine is natural in its quantity and quality; and we are therefore thrown back upon the heart to explain this swelling of the lower limbs.

We examine the heart. We percuss, and we find that the area of its dulness is about normal. We feel its pulsations, and we do not find them excessive. We listen to its sounds, and we find them normal when the ear is applied over the organ after the patient has been at rest. But you know that I never content myself, when I find this association of symptoms, with listening to the patient's heart only when he is at rest. It is not a fair test at all. It is necessary to excite the heart, to cause it to move with more force and with more rapidity, to learn whether there is any obstruction in its valves; and therefore I caused this man to walk some twenty paces and return as fast as he could, though he cannot walk very rapidly, as he is old and somewhat stiff; and, by the time he got back, a very strong murmur was heard at the upper margin of the heart, above and within the apex, and towards the axilla. Such a murmur in this situation of course indicates mitral regurgitation,—and mitral regurgitation almost necessarily implies mitral obstruction; and therefore we have in the fact of this obstruction a sufficient explanation of the dropsy of the legs.

I might have been content to go no further in the examination, or in the reasoning connected with it. I might have said, "We have here a case of chronic dropsy with a mitral obstruction," and there the matter would have ended. But in all the cases I examine, wherever there is no insuperable objection, I make it a point to explore all the organs sufficiently to determine whether they are sound or whether they are diseased. Now, in examining this man's heart, it was necessary to determine, not only whether there was or was not a murmur in the heart, but a good deal more than that. Were all the sounds natural in quality? Were they natural in rhythm? Were they conducted in different directions? Did they preserve at a distance from the heart their natural qualities? Did they cease to be heard at a certain distance from that organ? In determining these questions by a physical examination, and also in examining the lungs, a novel and very interesting fact was discovered, and a problem was laid before me, which, if I cannot elucidate, I will at least state to you.

On passing the ear over the middle of the right side of the chest, I was very much surprised to find, at about the point which I here indicate with my finger, a little above the right nipple and slightly within it, a murmur. It was a blowing murmur, and, so far from it being necessary for the patient to use exertion and excite the action of his heart in order to generate this murmur, as was the case with the mitral murmur, it was heard all the time, no matter how quiet he kept. It was increased, it is true, after exertion, but it was nevertheless present while the patient was perfectly at rest, whether standing, sitting, or lying down. This murmur, too, was very evi-

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dently systolic,—that is to say, systolic in relation to the heart; it was synchronous with the first sound and the apex-impulse of the heart, and with the radial pulse. Now, what is the mechanism of this murmur? What is there under that point of the chest to give rise to a systolic, rough, arterial murmur? That is the question; and you will see at once, if you recall your anatomical knowledge of the relations of this part, that it is a very difficult problem to solve.

Before dismissing the patient, I will ask you to verify the facts which I have read to you from the notes, so far as external inspection goes. You will notice the enlargement of the veins upon the right side of the chest. The external mammary veins are much more enlarged upon the right side than upon the left. There is noted in the history which I read to you that there is a little more flattening over this right mammary region than over the left. I am not convinced that that condition now exists. Moreover, I do not see that there is any difference in the movements of the two sides. Where this murmur is heard, there is a diminution in the percussion resonance.

Now, the questions are, What is the nature of this murmur, and how is it generated? You will bear in mind, from what has been said in the notes of the case which were read, that this is a murmur not directly derived from the heart, because between the point of its generation and the point where the heart-sounds proper are heard there is a space where hardly any sound is audible. It is very evident, therefore, that there is a local cause for this murmur. That is also proved by the fact that over the heart, when the patient is at rest, no murmur is heard, whereas the murmur in question is heard at all times,—more strongly after exertion, it is true, but it is never absent. Of course it is an arterial murmur,—that is, a murmur generated in or by an artery,—because it is coincident with the systole of the heart.

Now, what are the circumstances in which blood passing through an artery gives rise to a murmur? The circumstances are these, in one general proposition: whatever interferes with the flow of blood through the artery will occasion a murmur, greater or less. It is very evident that a roughness of the interior of the artery will do so; that a contraction of the artery will also give rise to a murmur, because it narrows the canal through which the blood is flowing, and therefore throws it into vibration; in the same way it is evident that pressure upon the outside of the artery will generate a murmur. In other words, to generalize the causes once more, whatever narrows the canal through which the blood flows with a uniform velocity will give rise to a murmur. Therefore, in our patient, something hinders the flow of blood in a vessel, and that vessel must be an artery.

What is the obstacle? Here we must refer to our anatomical knowledge. What arteries lie under the point where the murmur is heard? I show you distinct and accurate drawings of the heart, lungs, and vessels in the thorax. What are the vessels that lie where we have heard this sound? Evidently no arterial vessel lies there at all, except the branches of the pulmonary artery. The main trunk of that artery, as you know, divides and subdivides; and at the root of the lung, where the vessel enters the lung to be distributed through it, it divides into a number of branches, the largest being at the point where this murmur takes place. Now, it is very evident that something interferes with the flow of blood through that artery. What can it be? Is there an obstruction in the artery itself? Do you think it possible an obstruction within this artery could exist without occasioning more positive symptoms than are presented by this patient? Remember, he has no dyspnœa, no hurry of breathing, no difficulty of lying in any posture which he chooses to assume; he is not short of breath, and he has no œdema of the lungs. All or most of these things would necessarily occur if there was an interference with the current through this artery by external compression, or by an obstacle of any sort inside of the artery. I think, therefore, that this supposition may be laid aside.

Again, if the murmur is caused by pressure upon the outside of the artery, what can be the nature of that pressure? There is one form of disease of an artery which causes to a certain extent diminution of the arterial canal, and also, in one sense, pressure upon its exterior; and that is aneurism. Is there an aneurism at this point? I think not. In the first place, I would say that aneurism of this artery is so exceedingly rare that I have been unable to find a single case of it, and I have searched pretty diligently during the short time at my disposal. Again, if there were an aneurism, would it account for the peculiarity which you observe on percussion? You will remember that over this part where the murmur is heard there is evidently dulness on percussion, or diminished resonance, whichever you choose to call it,—because it is a matter of degree. If there were an aneurism sufficiently large to produce a small degree of dulness at that point, very certainly there would also be other signs; very certainly you would have an aneurismal thrill; very certainly there would be a complete annihilation of the respiratory murmur at the same point; very certainly there would be an elevation of the thoracic walls; and almost as certainly there would be very great difficulty of breathing, as there always is when an aneurism of the aorta presses upon the air-tubes. But nothing of that sort exists.

What other causes may possibly be invoked? There are only two suppositions which appear to me to be at all plausible: one is an enlargement of the bronchial glands which surround the root of the lungs, and, therefore, the vessels which accompany the root of the lungs; and the other is induration of the lung itself. Let us look at the last supposition first. In regard to the hypothesis of induration, we have in its favor a diminution of the resonance on percussion. But when we speak of induration, what do we mean? We mean, of course, the filling up of the vesicular structure of the lung. If the vesicular structure of the lung is filled up, it is very evident that we must have bronchial breathing. But we have no bronchial breathing in this case, and therefore I exclude peremptorily any consolidation of the lung. There are cases of consolidation of the lung other than those of pneumonic solidification,—of fibroid degeneration, for instance, which frequently occurs at the apex of the lung, but, so far as I know, never primarily in this situation. Looking, therefore, through the possible causes of induration of the lung which would press upon the pulmonary artery and give rise to this murmur, I do not see how, even upon anatomical grounds, any of them could exist in this case.

There remains, then, only the other single supposition, so far as my knowledge goes, and that is the possible enlargement of the bronchial glands about the root of the lungs. I cannot say why these glands should be enlarged in the case before us. I do not find any proof whatever of their enlargement, aside from the existence of the murmur I have been describing to you,—none whatever, except that and the dulness on percussion. It appears to me that the dulness on percussion is just of the degree which would be produced by a tumor of some sort underneath the lobe of the lung (which is here pretty thin, as you will remember), a tumor sufficient to compress it to a certain extent, but not sufficient to prevent all air from entering it. If such a tumor exist,—and we will suppose for the moment that an enlargement and induration of the bronchial glands does exist,—this glandular enlargement might press

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upon the lung, might diminish the amount of audible respiration, and might cause, and probably would cause, just such a degree and such a kind of dulness on percussion as we have found in this case.

Such are the only suppositions which it appears to me at all possible to make with a view of explaining the riddle in the case before us. Whether they are entirely satisfactory is another question. I do not myself think that we have demonstrated the nature of the tumor, but I do think that the reasons I have suggested to you are sufficient to prove what the tumor is not, on the one hand, and, on the other, what it probably is. But I should be very slow to assert, or to stake my character or professional standing, or whatever I may have that is most valuable, that such or such a condition actually exists.

At the next lecture I shall take up the discussion of an affection within the chest, which I think you will find also interesting in itself, as well as because it is generally neglected or overlooked.

ORIGINAL COMMUNICATIONS.

ON THE EFFECTS OF CONIUM IN EPILEPSY.

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CONIUM, although not altogether a new remedy for epilepsy, has not been praised so much as other anti-epileptics, probably on account of the doubtful or insufficient strength of the extracts or tinctures of hemlock as hitherto prepared according to the different Pharmacopœias. Since the neurotic action of conia was prominently brought out by the experiments of Dr. John Harley, who has also shown that this principle bears the same relation to the ripe and unripe hemlock fruit as does opium to the ripe and unripe fruit of the poppy, we have endeavored to ascertain the true medicinal application of so valuable a remedy in nervous diseases generally, cautiously inquiring as well into its beneficial as its injurious effects. Our researches, therefore, extend over very dissimilar maladies; and the following examples have been selected from among those we have closely watched, daily, or more than daily, for nearly a year, in order to determine whether conium rendered a positive service in epilepsy. We have been so much impressed by the increased comfort and improvement of the patients, that the conviction has gradually forced itself upon our minds that conium possesses a great power to remove the irritability and depression which are common to epileptics, and that, while acting as a tonic, it is furthermore the safest narcotic that can, under the circumstances, be employed, and free from the ordinary evils of morphia, belladonna, etc.

We need scarcely mention that previous to the exhibition of conium in a manner which may appear, perhaps, too unrestrained, we have carefully tested the action of the preparations employed in every case, and continued or increased the quantity administered so long as it has relieved or benefited the patient. On the other hand, in pointing out the advantages attendant upon the use of conium in epilepsy, as compared with other nervines and narcotics, we have refrained from reference to cases where the irritability or other nervous derangement of inveterate epileptics, which seemed to outlive all other means of treatment, has plainly yielded to the daily use of conium, and deal chiefly with some typical instances illustrating the culmination of the physiological effects of conia. These effects are most important, and indeed the only reliable indications whereby we are enabled to recognize that the limit of the full action of the remedy has been reached. We must state, in addition, that in these researches we have employed preparations of the unripe fruit of hemlock, which, as already asserted, contains the most conia, or active alkaloid principle. We have administered, over and over again, the extracts and tinctures of conium of our Pharmacopœia, in extremely high doses, with hardly any evidences of those effects appreciable when using the English juice of hemlock obtained from the green fruit, or the fluid extract prepared from the fresh unripe fruit by E. R. Squibb, M.D., of Brooklyn, which has proved to be the strongest of the fluid preparations of hemlock we have as yet employed. We have also endeavored to study the action of conicine, but have been unable to procure reliable preparations of this substance, and the results so far obtained are too indefinite to be worthy of record.

Case I.—Female, aged thirty-seven, with epilepsy of twenty-five years' standing, attributed by the patient to intestinal worms. The fits occur only before the catamenia, in series of three to eight. Has petit mal; does not bite the tongue during the paroxysms, which are interchangeable with attacks of asthma, during which the patient usually remains free from spasms. She is reduced to a low state of general health. No epileptic fits have occurred for two months, but she has been suffering for some weeks from severe paroxysms of asthma, which have been somewhat relieved by the exhibition of succus conii (imported by E. Parrish & Son, Philadelphia), administered in doses of one ounce three times daily. In addition to the evidence of lesion of the respiratory tract in the medulla oblongata, she has weakness and anæsthesia in the lower limbs, and an eruption of large and painful furuncles on the right side of the face and neck, the right side of the tongue displaying also a slight follicular eruption. While suffering from a severe attack of asthma, she was given one ounce of succus conii at 4.5 P.M., four hours after eating. She had taken no bromide of potassium for two months previously. At the time of the administration of the medicine, the pulse was 80; respiration, 26; temperature beneath the tongue, 98°.

4.15 P.M.—Pulse, 80,—smaller and weaker; respiration, 26; temperature, 98°.

4.20 P.M.—Second dose of one ounce of succus conii given.

4.27 P.M.—Patient is drowsy, can scarcely raise her arms, and says that everything is dark. Pulse, 76,—small and weak; respiration, 26,—very irregular; temperature, 98°. Face flushed; pupils dilated.

4.39 P.M.—Complains of pain across the forehead; appears to have difficulty in collecting her thoughts and speaking; cannot rise from her chair.

4.45 P.M.—Has become still more confused; a third ounce of succus conii given. Five minutes after, the pulse is 99,—very weak; respiration, 40, and irregular. She cannot articulate; head falls forward and to the left; circulation in the limbs quite deficient; hands cold and bloodless.

5.5 P.M.—Respiration, 52,—shallow and irregular.

The patient then had a chill, and was placed in bed, when she immediately fell asleep. The effects began to subside at 5.30 P.M. The patient was very thirsty during the evening, and complained of muscular soreness and twitchings. Next morning the asthmatic trouble was much relieved.

Case II.—Female, aged seventeen. Epileptic since the age of five; cause, fright from the bite of a dog. General health good; habit of body very full. Her fits are extremely severe and frequent,—from twenty to forty a month when the patient is not under treatment,—and attended with epileptic insanity, or hysterical and cataleptic symptoms. The paroxysms have

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been reduced in severity, and to an average of seven a month, by bromide of potassium, in doses occasionally increased to seventy-five grains. She was taking fifty grains of bromide thrice daily, when the juice of hemlock was given, to quiet her irritable and hysteric state.

First dose of one ounce of succus conii given at 4.5 P.M., her last previous meal having been taken at 12 M. The pulse was then 64; respiration, 16; temperature under the tongue, 98½°.

No appreciable effects were observed within fifteen minutes, at the expiration of which time a second ounce of succus conii was given.

4.37 P.M.—Patient feels heavy; complains of dimness of sight. Pulse increased to 98, small and weak, dropping a beat occasionally; respiratory movements increased to twenty a minute.

4.42 P.M.—Complains of pain across the forehead and great heaviness of the right side of the head; has double vision; pupils dilated.

4.45 P.M.—A third ounce of succus conii given. The pulse is increasing in frequency and weakness, still dropping a beat occasionally, and reaching 104 at 4.50 P.M.; respiration augmented to 26, and irregular; temperature, 100¾°.

4.59 P.M.—Patient cannot walk, but staggers and falls; circulation in the limbs very poor; hands cold and white.

5.5 P.M.—Respiration very shallow and irregular, increased to 32; pulse and temperature remaining as above.

5.20 P.M.—Patient walks with a staggering gait; her head feels light, and she complains of numbness in the right leg.

5.30 P.M.—The temperature has decreased half a degree, but the pulse and respiration remain at 104 and 32 respectively.

5.35 P.M.—Pulse 106,—very small and weak, intermitting occasionally; temperature diminished to 99½°; respiration, 32, as before. The patient is now very dull and sleepy, and fully under the influence of the conium.

The effects passed off in three hours, leaving the patient very thirsty, with twitching and feeling of weariness in the muscles, but very much quieter, and no longer hysterical.

Case III.—Male. Six days after birth he was seized with slight twitching of the face and rolling of the eyes, soon succeeded by convulsions of the limbs, which remained thereafter in a state of tonic contraction. The fits recurred every minute or two, with unabating frequency, for several hours during the day or night. He was restless, starting upon being touched, or upon any sudden noise, screaming during sleep, with very irregular action of the bowels. Skin hot, and pulse very rapid, symptoms which indicated very plainly the hydrocephaloid disease of which the infant died three months after the onset of these distressing convulsions.

Every remedy proved powerless to arrest even temporarily the convulsions and to quiet the infant, excepting the succus conii (from William Ransom, Hitchin, near London), given at first in doses of ten minims every two hours, and gradually increased to one fluidrachm, repeated every two or three hours, until the convulsions would discontinue with the narcotic effects of conia. Among the immediate changes noticed when the infant took twenty minims of the succus every two hours, were a lessening of the fits, with regular evacuations of the bowels, and an excessive secretion from the kidneys, urine being passed almost every hour. The frequency of the pulse and respiration decreased, the skin became cool, and the infant would sleep for five or six hours, free from fits and screaming, and with the limbs quite relaxed. A second or third drachm of the juice, exhibited two or three hours after the preceding, would show very strikingly the deficiency of the peripheral circulation, the pulse at the same time being much more frequent, but weaker, respiration hurried and irregular, and the hands and feet cold and bloodless. The pupils would become greatly dilated, with perceptible strabismus, the face flushed, the tongue dry, and the infant, when sleeping soundly, would be observed at times to move the lips and mouth in an automatic manner, as though sucking, or would be seized for a while with hiccough or vomiting,—these two last-mentioned phenomena always before the production of complete narcotism. In addition, the bowels would act but rarely, and the feces, white and hardened, would on their passage give the infant great pain. The maximum of succus conii ever employed was three fluidrachms within twelve hours, and the succus was administered in this manner, with occasional intervals, for several weeks. The infant, however, died in a severe fit, at a time when he was apparently less distressed, and had not taken the juice of hemlock for over a week.

Case IV.—Male, aged thirty-six. He had formerly been troubled with epileptic paroxysms, attended with mania, lasting two or three days, which first made their appearance during adolescence, and were attributable to no known cause. He passed over a year without any spasms, though occasionally subject to delusions and religious monomania, or to sudden absences, during which he would lose consciousness for an instant, though without suspending what he might happen to be doing. He had been using internally three drachms of succus conii (Ransom's), with thirty grains of bromide of potassium, three times daily, and had a seton in the back of his neck. Having remained for several weeks entirely free from the above-mentioned symptoms, he suspended the treatment and removed the seton. Thereupon the epileptic paroxysms recurred eight times in one day, rendering him towards evening very restless and excitable. He would not reply to questions addressed to him, but walked up and down the room, and did not seem to bear the light well. The pupils were much contracted; face flushed; tongue slightly coated and tremulous; pulse, 98, and full; respiration, 16; hands livid and tremulous, but not cold. He had taken no food, excepting some coffee in the morning.

One ounce of succus conii (Ransom's) was given at about 7 P.M., and the same quantity half an hour later.

8.30 P.M.—Pulse, 104, and much feebler; respiration, 28; pupils act more readily, and the intolerance of light seems to have disappeared. The patient is less indisposed to talk, and complies more readily with the requests of his attendant. Has ceased walking about the room.

9 P.M.—A third ounce of succus conii given. Ten minutes after he complains of great thirst, and says that the room seems dark. Pulse, 110,—weaker; hands look paler; eyelids are heavy. The patient passes about a pint of high-colored urine, and complains of a burning sensation during micturition. He feels tired, and every now and then dozes for a while.

10.10 P.M.—A fourth ounce of succus conii given. Pupils very much dilated; face flushed; patient complains of dimness of sight and pain in the forehead.

The natural appearance of the retina in this case having been previously observed on several occasions, an ophthalmoscopic examination was made at this time, for the sake of comparison. The optic disc was slightly and not uniformly reddened; the arteries were more distinct, and the veins much larger, than they appeared at a former examination, or at a subsequent one, made after the patient had completely recovered.

The effects of the fourth dose of succus reached their utmost degree in about twenty minutes after taking it. The pulse, very feeble, increased to 125; respiration, 34,—very irregular and hurried. The patient was still troubled with dryness of the throat, and was very thirsty, drinking freely of ice-water. Felt nausea, and had hiccough for about eight or ten minutes. Was very dizzy, and unable to stand or walk unsupported. The eyelids drooped; pupils very much dilated; face greatly flushed; extremities cold and bloodless. At 10.40 P.M. he was fully under the influence of conia, and asleep. Action of the heart regular and distinct, but not strong; profuse perspiration over the head and neck; occasional moaning for nearly an hour, after which the sleep appeared natural, and the patient did not awake until nearly eight o'clock the next morning. He then experienced a feeling of lassitude, or lack of muscular energy, and thirst, and the same burning sensation on urinating of which he complained the night before. Otherwise he felt easier, and completely relieved from the delusions and hallucinations which he said distressed him during this relapse. Subsequent treatment has confirmed the benefit of succus conii in high doses, the patient continuing with very rare attacks of absence, and without any delusions or monomania.

Case V.—Female, aged eighteen, with epilepsy of nine years' standing. Cause unknown. Grandmother and sister epileptic. Patient is scrofulous. Fits severe, and occurring

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about ten times a month, but reduced by large doses of bromide of potassium to about two or three a month. Was taking forty grains of bromide of potassium three times a day, and, being very nervous, she was ordered half a drachm of Squibb's fluid extract of the fresh unripe fruit of hemlock, to be repeated every half-hour until sleep should be induced.

She took the first dose at 3.45 P.M.,—3½ hours after eating. The same quantity was given at 4.5 P.M., and a third dose at 4.35 P.M.

The pulse, respiration, and temperature were observed respectively as follows:

Time,—	3.30	4.10	4.20	4.45	5	5.10	5.30
Pulse,—	82	82	84	84	92	84	80
Time,—	3.30	4.15	4.35	4.50	5.10	5.30	
Resp.,—	16	20	20	20	20	16	
Time,—	3.30	4.10	4.40	5	5.15	5.35	
Temp.,—	98½°	97½°	97°	97°	98°	98¼°	

The other phenomena were:

3.55 P.M.—Patient feels drowsy.

4.12 P.M.—Dropping asleep; head feels heavy.

4.15 P.M.—Cannot walk without staggering, and falls when she tries to turn. Her eyes are dim; pupils enlarged; face flushed.

4.22 P.M.—Cannot stand with eyes shut.

4.25 P.M.—Circulation in the extremities very deficient; complains of cold hands.

4.30 P.M.—Is very sleepy; does not answer when her name is called.

4.40 P.M.—Her jaw jerks, and is seemingly beyond her control. She is fast asleep.

6.15 P.M.—Has recovered almost entirely from the effects of the conia, only slight dimness of sight and staggering remaining; nervousness gone. In the evening she complained of sickness at the stomach and of burning pain upon passing urine. Density of urine before taking the extract as above, 1021; after taking the extract, 1013. Reaction acid in either case.

Case VI.—Male, aged forty-four. Has been a hard drinker, though he never suffered from any marked symptoms of alcoholismus. Has been affected for the last two years with epileptic vertigo, occurring several times a day, and succeeded by a peculiar feeling of unsteadiness in the limbs, which makes him stagger. Has never had spasms; is troubled with dyspepsia. Ophthalmoscopic examination shows nothing unnatural in the size of the blood-vessels of the retina or the color of the optic disc. Has been using three drachms of succus conii (Ransom's) and twenty grains of bromide of potassium three times a day, and two grains of ergotine in the morning and evening, with great relief. Upon discontinuing treatment for four days, the attacks of vertigo recurred in the morning with unusual frequency, rendering him very dizzy.

One hour after a light breakfast, at 10 A.M., he took thirty minims of Squibb's fluid extract of fresh unripe fruit of hemlock. His pulse was then 76 and irregular, not firm; respiration, 18; and temperature under the axilla, 98°. No vertiginous attack or other appreciable effect during half an hour.

10.30 A.M.—Dose of thirty minims of fluid extract of conium repeated.

10.38 A.M.—Begins to feel dimness of sight and parching of the throat. Pulse, 90,—weak; respiration, 18; temperature in the axilla, 94½. Is free from the unpleasant giddiness or swimming of the head which he has had all the morning, but complains of being still nervous.

11 A.M.—A third dose of fluid extract taken.

11.20 A.M.—Sees objects double; pupils dilated; retina congested, with blood-vessels much distended; feels drowsy and very thirsty. Pulse, 78,—very feeble; hands and feet bloodless and cold; action of the heart regular.

11.28 A.M.—Cannot walk or resist the inclination to go to sleep, and sleeps soundly until after 2 P.M. Awoke quite refreshed and cheerful, with an indescribable lassitude in all the muscles, while the other effects of conia seemed to have passed from the system. Ate some food, and relished it, but soon after had nausea and vomiting, but no further trouble. He continues to use half a drachm of bromide of potassium, with half a drachm of Squibb's fluid extract of the fresh unripe fruit of hemlock, three times a day, and two grains of ergotine morning and evening. Counter-irritation to the neck has also been regularly kept up, together with a tonic regimen; and there has been for over two months no return of the vertiginous attacks, which previously occurred several times every day.

We may briefly allude to another instance indicating that conia, like bromide of potassium, has apparently no unfavorable influence upon the progress of gestation.

Case VII.—Female, twenty-four years of age. Her first epileptic fit occurred in 1862, upon her being severely beaten by her stepmother. Prior to her admission into the Hospital, August 26, 1870, the fits usually occurred at night, and about twice a week. Her menses ceased two months before the latter date, when she became pregnant. She was ordered twenty grains of bromide of potassium, three times daily, with succus conii. The dose of bromide has been gradually increased to 40, 50, 60, 70, and 75 grains, three times daily, with one and a half fluidrachms of succus conii, which she has taken respectively in the months of September, October, November, and December. She had sixteen fits during September, eighteen in October, six in November, and only one fit in December,—occurring on the 1st. Notwithstanding the very large doses of bromide given at the above different periods, and the amount of succus conii uninterruptedly administered to the patient, the fœtus gives the usual signs of life, and the mother is in good general health, showing no ill effects whatever beyond a slight cutaneous eruption produced by the bromide. The same perfect absence of effect on the fœtus of large doses of bromide of potassium has been observed by Dr. Echeverria in three other instances. We propose further to ascertain how far the narcotic effect of conii will be shown by the child at its birth. Dr. Echeverria has seen recently a case where ten drops of Magendie's solution, injected hypodermically to assuage the pains of labor in a primipara, operated actively upon the child, which was born quite insensible, and in a state of narcotism lasting for a few hours. The same interesting effect of the hypodermic use of morphia during labor has been seen, on three or four occasions, by Prof. C. A. Budd, who has thereupon found the child to be born in a strikingly stupefied condition.

We have further had occasion, at the Hospital, to recognize the effects of conium in the cases of two epileptics upon whom trephining of the skull had been performed, and to whom the drug was given in order to relieve pain and produce sleep after the operation. To one of them Squibb's solid extract of conium was given (gr. ij) every hour, with an equal quantity of ergotine. (For details of case, see Echeverria On Epilepsy, p. 347, New York, 1870.) In the second instance, three and a half drachms of Squibb's fluid extract of unripe fruit of hemlock, with gr. viii of ergotine, were administered during the eight hours following the operation, and the effect was the production of a sound sleep, lasting eight hours.

We might add other examples of chorea, hemiplegia, locomotor ataxy, and myelitis, where we have tested the full action of conium, with the above-described results. We abstain from their repetition, lest it might become too tedious to the reader, or lest the medicinal value of conium in epilepsy might lose the prominence we wish to give it in this communication.

The ultimate effect of conia, as shown by Dr. John Harley, is to produce sleep. To induce such effect in epilepsy, conium must be administered in frequently-repeated doses. Ordinarily no quantity short of half an ounce of the English juice, or from half to one drachm of Squibb's fluid extract of the fresh unripe fruit of hemlock, will influence the nervous centres in any decided narcotic manner. The darker the juice, the more powerfully will it act. The utmost effect of hemlock becomes conspicuous in from twenty to thirty minutes after two or three ounces of the juice, or one or two drachms of Squibb's fluid extract, have been taken. Patients are met with, of course, in whom the maximum

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effect is not induced unless such respective quantities are exceeded.

The operation of conia lasts from two to six hours, and then disappears, leaving no other traces than a sense of diminished muscular energy, in a few instances accompanied by nausea or hiccough, and, more frequently, by a burning sensation on urinating, both of which phenomena are of short duration. The nausea, hiccough, and double vision following the exhibition of large doses of conium are noted among the physiological effects of conium by Stillé (Therapeutics and Materia Medica, vol. ii. p. 262, Philadelphia, 1864).

It is important that we should remark—and in this our observations corroborate those already made by Harley—that the weaker and more inactive the epileptic is, the larger will be the quantity of conium required to affect him as a narcotic. And it is striking, as further asserted by Harley, that conium really operates as a tonic upon the muscular system. In this respect, conium, when not carried to the degree of paralyzing the muscular power, resembles in its action cod-liver oil. The fact is quite remarkable with epileptics taking three or four drachms of the juice, or thirty minims of Squibb's fluid extract, three times daily, for the irritability of the spinal system gradually diminishes, with notable improvement in their bodily condition. This tonic effect of conium is no less obvious in myelitis. We have in no case noticed that conium interferes with the sensory functions.

We have found the pulse regular throughout the operation of conium, but not of undiminished force and volume, as stated by Harley. Our observations lead us to believe that conia, from its special influence on the pneumogastric nerve, operates on the innervation of the heart with paralyzing effect, the internal sensibility of the organ being affected through the depressor nerve or sensitive cardiac branch, of Cyon, which accounts for the bloodless condition of the limbs, from contraction of the peripheral blood-vessels, when the full action of conium is produced. Conium, therefore, differs from bromide of potassium, which operates in a paralyzing manner mainly on the vaso-motor nerves. We are satisfied that the sympathetic system is primarily involved in the production of epilepsy, circulation being thereby deranged from the inception of the disease. Hence the advantage which may be derived from the judicious employment of remedies like bromide of potassium and conium, operating chiefly on the motor nervous tracts and the innervation of the whole circulatory system. We look upon cerebral anæmia, due to excitation of the arterial nerves, as the initial link in the chain of epileptic phenomena. The confusion generally made between hyperæmia and congestion explains why cerebral hyperæmia may be still considered by some writers as an etiological factor of epilepsy. Hyperæmia is a physiological phenomenon of short duration, depending upon stimulus and greater action of the venous system, whereby the flow of oxygenated blood is accelerated; whereas, congestion is, on the contrary, a morbid phenomenon, the result of vascular paralysis of more or less permanency, and causing stagnation of blood. Although the capillaries overflow, as we may say, in either case, hyperæmia is of such a transient nature that it cannot induce structural changes, which are, however, the necessary consequences of congestion. Excitation of arterial vaso-motor nerves causes anæmia, but such excitation, as just observed, is momentary; and, if prolonged, it soon paralyzes the arterial walls, congestion following thereon. It suffices, therefore, to bear in mind such teachings of the physiology of the circulatory systems, to understand how cerebral congestion must be, and is, so intimately associated with epilepsy, notwithstanding the occurrence of anæmia at the very onset of the epileptic paroxysm. The one—anæmia—is the initial, the other—congestion—the consecutive, phenomenon of epilepsy; both originating in a derangement of the sympathetic system.

Note.—The epileptic of Case VII. gave birth, on the 24th of March, to a very lively boy, who seems in no appreciable manner affected by the large amount of conium and the still greater quantity of bromide of potassium steadily taken by the mother up to the time of her confinement.

RUPTURE OF BRONCHUS OF WILD DUCK.

BY W. H. WINSLOW, M.D.

ALMOST beautiful illustration of the conservative power of nature was afforded me recently by the bronchus of a canvas-back duck. The cook was preparing two of them for baking, when she noticed something abnormal in one of them, and called my attention to it. Upon examination, it was evident that at some previous remote period the left bronchus of the duck had been ruptured upon the outer side, where it joined the trachea at the bifurcation. The serious injury had been partially repaired by a pouch or dilatation of curious construction, about the size of a pullet's egg, and shaped like a cockle-shell, which enclosed the opening, but was itself incomplete opposite its attachment, where a round hole, a quarter of an inch in diameter, still existed. It was attached to the trachea and bronchus, much as a Malpighian corpuscle rests upon a splenic artery. This adventitious growth was very delicate and curious. A fine network of white fibres, starting from the edge of the rupture, ramified over the walls of the pouch in every direction, looking like the delicate frostwork of a window-pane in winter. Some of these fibrillæ led to the margin of the round hole, as if about to bridge it over, while others terminated upon the surface in microscopic lines. Between and upon this framework a clear, transparent, gelatinous, homogeneous, and continuous membrane was extended, inelastic and firm to the touch, and forming the walls of the pouch. Its origin seemed to be from the fibrous tissue of the bronchus, as I could trace the structure in between the coats of the tube. Upon blowing through the trachea, the air passed freely out of the distal end of the bronchus; but upon blowing into this end, the current of air passed mostly into the pouch, and probably in the living bird, from expiration, into the middle mediastinum, though a little passed out of the trachea.

I made a careful examination and comparison of the viscera of both birds, they being about the same weight, but found nothing abnormal. The lung corresponding to the ruptured bronchus was a little smaller than its fellow, or the corresponding lung of the other bird, but under the microscope there was no apparent difference in texture. All the other organs were apparently healthy. There was no emphysema of the chest or neck evident, though it must have existed during life. Probably the contraction of the tissues after death had expelled any air therein. Probably, if we could diagnose such a case in man, our prognosis would be exceedingly grave; yet in this wild bird life and health had apparently existed with the injury for many months, and repair had made good progress, until interrupted by the sportsman.

IODIDE OF POTASSIUM IN BRIGHT'S DISEASE.—Prof. Cryni, of Brussels (*Brit. Med. Journ.*, from *Wiener Med. Wochenschrift*), strongly recommends this salt, in large doses, in the second stages of Bright's disease. Favorable results by this treatment are also said to have been obtained by Drs. Baudon and Semmala, of Naples, and Dr. Caspari, of Meiningen.

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RUPTURE OF THE LUNG

WITHOUT INJURY OF THE THORACIC PARIETES.

BY JOHN ASHHURST, JR., M.D.,

President of the Pathological Society, Surgeon to the Episcopal Hospital, etc.

Read before the Pathological Society.

T. S., an Englishman, æt. 32, of robust frame but intemperate habits, entered a tavern in Frankford (23d Ward) on the evening of Thursday, March 2, 1871, and there met with a party of idlers, some seven in number, who amused themselves by making him drunk. Passing rapidly through the various stages of intoxication, he finally became insensible, and in this condition slipped from his chair to the floor. The proprietor of the tavern now thought proper to interfere, and insisted upon the removal of the unconscious sleeper; he was accordingly carried or dragged away by his boon companions, who ultimately disposed of him by depositing his helpless frame in an empty milk-wagon which stood near. Here he was found at an early hour the next morning by the owner of the wagon, who, failing to arouse him, sought the aid of two policemen, who placed him in a wheelbarrow and trundled him off to the station-house, to sleep off, as they supposed, the fumes of his liquor.

It being found in the course of the morning that the man's right arm was powerless and very much swollen, a physician was sent for, who, after examination, sent him to the Episcopal Hospital. I happened to be in the house at the moment of the man's admission (about 2 P.M., fourteen or fifteen hours, therefore, after his fall from the chair in the bar-room), and perceiving that, although able to walk with slight assistance, he was suffering from severe shock and had evidently met with a serious injury, had him placed at once in bed, when his condition was found to be as follows:

The right arm was tense and much swollen, but, though lying helplessly by the patient's side, could be freely moved in every direction, being evidently neither broken nor dislocated. The radial pulse was quite distinct. A soft, fluctuating swelling existed beneath the pectoral muscle at the upper part of the chest, and invaded also the root of the neck, the line of the clavicle, however, not being obscured. The breathing was labored and shallow, but there was not much facial turgescence. *Auscultation* showed a complete absence of the vesicular murmur over the lower two-thirds of the right lung, with bronchial and even amphoric respiration, gurgling, and bronchophony. The vocal fremitus was diminished. *Percussion* gave a flat sound posteriorly, the line of dulness varying with the posture of the patient. There was no cough. The *pulse* was feeble and rapid, and the surface cold. The patient could give no account of the way in which he was injured, and, though answering intelligently when spoken to, constantly relapsed into a semi-unconscious state, with stertorous breathing. No fracture of the ribs nor other lesion of the thoracic wall could be detected, the only marks of external injury being superficial contusions and chafings of the shoulder, with the fluctuating tumor—evidently a hæmatoma—already mentioned. There was no emphysema. The diagnosis made was rupture of the right lung at its lower part, with effusion of air and blood into the pleural cavity, constituting the condition known to surgeons as *hæmo-pneumothorax*.

The next day (March 4) reaction was fully established: the dyspnœa was somewhat increased, as was the turgescence of the face; the patient, still somewhat soporose, was, when aroused, anxious, complaining of a sense of suffocation and of thirst. The *auscultatory* signs were as before, except that there was less gurgling, and, in addition to the previous sounds, marked metallic tinkling, with ægophony. The cardiac sounds were distinctly heard on the right side of the chest. *Percussion* much as before,—rather more dull anteriorly. The *pulse* was 108 and of moderate strength. There was slight gaseous distention of the stomach and bowels, with occasional eructation. The *urine*, very scanty and high-colored, was drawn off by the catheter. In the evening the pulse was 116, and the respiration 32.

March 6.—The patient was evidently worse. Intense anxiety, with dyspnœa and a sense of impending death. *Auscultation* gave vesicular murmur above (as before), with bronchial respiration, masked by a loud, creaking, friction sound over the whole of the lower part of the chest, but particularly well marked posteriorly. *Percussion* dull behind and laterally, but slightly less dull in front than at the last examination. No change in line of dulness on varying the patient's posture. Frequent eructation, with slight cough and expectoration of frothy mucus, but without the slightest tinge of blood. Bilious vomiting, and rejection of everything taken by the mouth. The swelling over the shoulder was more diffused, and was becoming consolidated. The arm had become extremely painful.

During the following night the patient became somewhat delirious, and died about 7½ o'clock on the morning of March 7.

A *post-mortem* examination, made on the afternoon of that day, revealed a small collection of fluid blood between the muscular planes in the supra- and infra-clavicular regions, the muscles themselves being very succulent and infiltrated with bloody serum. On carefully raising the anterior wall of the chest, the lower part of the right lung was found collapsed, and firmly bound down by a layer of organized lymph, mingled with blood. A space large enough to contain a small orange existed between the pulmonary and parietal layers of the pleura, both of these being covered with coagulated blood and organized lymph, which formed moderately firm adhesions between the lung and back of the chest, as well as between the lobes of the lung itself. The lungs and heart were removed with great care, and washed, when, by inflating the trachea, a small rupture was made apparent at the anterior edge of the lower lobe of the right lung. The lung-tissue appeared perfectly healthy, but the larger bronchial tubes had already become the seat of calcareous change. The left pleura and lung were normal, as were the pericardium and heart, the latter containing soft clots and fluid blood. The abdominal viscera were healthy, with the exception of the kidneys, which were congested, and presented (to the naked eye) a somewhat fatty and granular appearance. The cranial cavity and its contents were normal, except that there was some turgescence of the vessels of the pia-mater, with slight subarachnoid effusion.

The most careful examination failed to reveal any fracture of the ribs, or indeed any injury of the chest-wall, the parietal pleura, though covered with lymph and clotted blood, being, so far as could be ascertained, intact.

Remarks.—Rupture or laceration of the lung, except as the result of a penetrating wound of the chest or of a fracture of the ribs, is an accident which is seldom met with in civil life. I have appended to this paper references to all the cases with which I am acquainted. In military practice these cases are more often seen, as the result of injury by spent balls or pieces of shell, and are among the lesions which were formerly attributed to the "wind of a ball."

The *cause* of the injury (in civil life) has been usually the crushing or squeezing of the chest, as by the wheel of a cart passing over it. In only four cases is a fall mentioned as the cause, and in those a fall from a considerable height. Hence it is scarcely credible that this patient was injured, as asserted by his companions, by merely slipping from his chair; it is more likely that, in their not too sober efforts to lodge him in the milk-wagon where he was found, they dropped him on the ground, and pushed the wheel of the vehicle over his chest and shoulder.

The *symptoms* were sufficiently characteristic of the presence of blood and air in the pleural cavity, but there were certain symptoms, often well marked, which were in this case conspicuous by absence. Thus, there was no bulging of the intercostal spaces,—no lumbar ecchymosis,—no evident wave of fluid upon succussion,—and, on the other hand, no undue resonance on percussion. The explanation is to be found in the slight extent of rupture, and the consequently small amount of blood and air effused. The patient, moreover, was

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not seen until enough coagulation had occurred on the surface of the parietal pleura to diminish the resonance even in that portion of the chest in which pneumothorax existed. The subsequent increase of resonance was evidently due to the hardening and contraction of the clot and organized lymph which surrounded the aerial accumulation.

The *mechanism* of the lesion in these cases is, doubtless, as pointed out by Gosselin (whose memoir on the subject is the best extant), that the chest is suddenly compressed while the lung is distended and the glottis closed by the patient involuntarily holding his breath; the elasticity of the chest-wall enables it to escape injury, but the distended lung cannot yield, and necessarily gives way.

The *prognosis*, though grave, is not necessarily unfavorable: the patients are usually young, and recovery is by no means impossible if there be no serious complication. Had the patient, whose case has been reported, been of sober habits, and with well-acting kidneys, and had he been put under surgical care as soon as injured, there is no apparent reason why he might not have recovered. The pulmonary laceration was slight, and was firmly sealed by the fourth day; and the amount of air and blood in the pleural cavity was so small that there would not probably have been any risk of the ultimate development of empyema.

The *treatment* of these cases does not differ from that of other wounds of the lung, and need not be particularly referred to.

In the following table those cases (sixteen in number) are put first in which there was *no* fracture of the thoracic parietes, and then those in which, though the ribs were broken, the fracture did not correspond with the seat of pulmonary laceration, and in which the fracture, therefore, is to be considered a mere accidental complication, and as not causally connected with the injury of the lung.

Doubtless other cases have been recorded which have escaped my attention. I have purposely omitted such as were the result of gunshot injury.

Cases of Rupture of the Lung.

No.	Sex, age, etc.	Mode of injury.	Result.	Author.	Reference.
1	Male, —.	Run over by wheel of mail-coach.	Died, ¾ hour.	R. W. Smith.	*Dublin Journal of Medical Science*, vol. xviii. p. 149.
2	Female, —.	Not stated.	Died, ——.	Id.	Ibid.
3	Male, —.	Not stated.	Died, ——.*	Id.	Ibid.
4	Male, 38.	Squeezed between wheel and post.	Recover.d, 5 weeks.	Saussier.	Gosselin, *Mém. de la Société de Chirurgie de Paris*, t. i. p. 224.
5	Male, 10.	Run over by carriage.	Died, 2 days.	Bermond.	Ibid., p. 236.
6	Male, 22.	Fell from second story of a house.	Recovered, 1 month.	Gosselin.	Ibid., p. 202.
7	Male, 12½.	Squeezed by wheel of wagon.	Recovered, 25 days.	Id.	Ibid., p. 210.
8	Male, —.	Run over by wheel of cart.	Died, soon.†	Watson.	*Treatise on Homicide*, etc., Edinb., 1837, p. 100.
9	Male, 7.	Run over by wheel of cab.	Died, 2 days.	Johnson.	*British Medical Journal*, March 5, 1859.
10	——, —.	Similar case to the preceding.	Died, 2 hours.†	Poland.	*Holmes' System of Surgery*, 2d ed., vol. ii. p. 616.
11	Male, 24.	Run over by wheel of cart.	Died, 10 days.	McDonnell.	*Dublin Quarterly Journal of Medical Science*, November, 1864, p. 205.
12	——, —.	Not stated.	Died, ——.	Id.	Ibid.
13	Male, young.	Fell from horse on left arm.	Died, few days.	Gross.	*System of Surgery*, 4th ed., vol. ii. p. 402.
14	Male, 11.	Run over by wheels of wagon.	Died, 3 days.‡	Harlan.	*Proc. Path. Soc. of Philada.*, vol. i. p. 161.
15	Male, 18.	Run over by wheels of cart.	Died, 3 days.	Lee.	*Proc. Path. Soc.* in *Amer. Journ. of Med. Sci.*, April, 1862, p. 419.
16	Male, 32.	Not ascertained.	Died, 5 days.	Ashhurst.	*Vide supra.*
a	Male, young.	Jumped from second-story window.	Died, few hours.‖	Hewson.	*Medical Observations and Inquiries*, 2d ed., vol. iii. p. 384, and *Works*, ed. by Gulliver, p. 297.
b	Male, —.	Fell from height.	Died, few minutes.	Roques.	Gosselin, *loc. cit.*, p. 218.
c	Female, 2½.	Run over by wheel of carriage.	Died, 4 days.	Tatum.	*British Medical Journal*, March 7, 1857.
d	Male, 25.	Not stated.	Died, soon.	——	Ibid., March 5, 1859.

* Prof. Smith records a fourth, similar case, occurring in a dog.
† Complicated by rupture of liver.
‡ Complicated by rupture of spleen.
‖ Complicated by fracture of skull.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROFESSOR PANCOAST.

Reported by James Graham, M.D.

CYSTIC TUMOR OF THE THYROID GLAND.

MAGGIE H., æt. 21, has a tumor about the size of a guinea-hen's egg, situated in the middle line of the neck. It is soft, elastic, and unattended with pain, or discoloration of the skin. In deglutition it moves up and down with the larynx and trachea.

It is a cystic tumor of the thyroid gland; and, as it is disfiguring, inconvenient, and a source of mental anxiety, from its constant increase in size, she has come to us from the interior of the State to have it removed.

These growths at times attain a very large size, dipping down deep in the neck between and around the trachea and œsophagus, and, by their pressure, may in the end cause suffocation. Now, why operations upon cystic tumors of this gland should produce more serious results than operations upon those of any other gland of the body, is not known. But such is the case. Its enlargement, when marked, affects the heart and arteries, and, in some cases, causes the eyes to project forward. It is possible that disease of the blood-glands—viz., the thymus, thyroid, and spleen—may have some peculiar, injurious, modifying power over the red corpuscles of the blood, and in this way give rise to the conditions above noted.

In this case a long course of internal medication, aided by external applications, has been employed, but without any benefit; so that the question now is, "What operation can be performed for her relief?" We might puncture the cyst and inject with tincture of iodine, or insert a seton. I have performed both these operations several times, and never lost a case, though I have seen patients thus operated on so far reduced as to make the result for a time extremely doubtful. I prefer, when the tumors are yet of moderate size, the process by enucleation, and have up to this time in that way removed some twenty of these cysts, and with excellent results. As the principal danger to be apprehended is from hemorrhage, we have to be very careful in the use of the knife, for there are a great many large blood-vessels in the immediate vicinity of the wall of the cyst, which must be avoided. It is especially important to recollect, when the tumor to be removed is in the middle line, the occasional existence of a middle thyroid artery, which in one out of perhaps every fifteen or twenty subjects is given off by the innominate, and ascends along the middle of the trachea to the thyroid gland. In these cases the operator should use as much care as the Mohammedan who skates into heaven on a spider's web over the bridge of Al-Sirat.

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Now, as the patient is fully under the influence of the ether, I make a double curvilinear incision,—Hogarth's line of beauty,—and, instead of attempting to dissect out the tumor, I cut the bands that confine it. These layers that you see me dividing on the grooved director belong to the isthmus of the gland. We take them up carefully, and divide them one by one, until we have now arrived at the wall of the cyst. I next cut the bands that hold it on either side, and, slipping the pulpy portion of my finger beneath its upper part, I roll out the sac. Although no artery has been divided, the hemorrhage is quite profuse, for the veins are large, and, being unprovided with valves, bleed freely, like arteries. It can readily be controlled, however, by plugging the cavity lightly with lint saturated with the alcoholic styptic, composed as follows:

℞ Saponis (Castile), ʒi;
Potass. Carb., ʒii;
Spts. Vini Rect., fʒiii.

After removal, the tumor resembles very closely, in size, appearance, and consistence, the testicle, but on section it is seen to be composed of numerous small cysts, of the average size of a grain of barley, containing a ropy, yellowish-tinted fluid. These cells are probably the natural, minute, hollow elements of the gland, increased in number and enlarged, possibly from the breaking down of several into one.

[One week after the operation the patient was introduced to the class. The edges of the wound had been brought together by sutures and adhesive straps, and covered with carbolated oxide of zinc ointment. Union by the first intention had taken place throughout.]

INVERSION OF THE TOE-NAIL.

A. T. D., æt. 32.

The nail on the big toe of his right foot is inverted, and has given him great pain for a number of months past. It is the fibular side which is affected, and it is surrounded by fungous granulations, the seat of a foul, irritating discharge. This is generally one of the results of wearing tight shoes: the nail, by pressure, gets too much curved, grows too far down upon the sides, and gets itself painfully entangled in the flesh as it tries to force its way outwards. We will wait until the patient is thoroughly etherized, as the parts are very sensitive, and any operation gives rise to great suffering.

In cases like this I never remove the nail, nor any portion of it; but, as the trouble arises from the edge of the nail dipping down into the flesh at the side of the toe, I cut away the soft parts, and leave the nail in a position where it can do no harm. Thus, with a sharp, double-edged knife, I expose the offending portion of the nail, by cutting away all the overlying structures; then, raising up its free edge, and separating it thoroughly from the parts below it with the thin handle of a scalpel, I slip beneath it a strip or two of adhesive plaster, and carry the ends beneath the ball of the toe and round upon the metatarsus, so as to force the soft parts down and the nail up. When the parts heal, the side of the nail will be free from any covering. One great advantage of this operation is that the patient is almost immediately enabled to attend to his business. I keep the parts covered for several days with a strong aqueous solution of subacetate of lead and laudanum.

[Two weeks later he walked into the room, with his shoes on, and said he felt no further inconvenience.]

CONTRACTION OF THE FINGERS.

This little boy, two years of age, was burnt severely in the palm of his right hand, two and a half months ago, by his clothes taking fire, and the resulting cicatrix has contracted his fingers into rigid, immovable claws. You will recollect a similar case operated upon a few weeks ago, the result of which was very gratifying. We will give him ether and repeat that operation.

As the palm is contracted and small, we will content ourselves to-day with operating on two of the fingers. I make a V-shaped incision, with the base at the metacarpo-phalangeal articulation of the index finger, and the apex extending well into the palm; then dissecting up this flap, which is cutaneous, and does not expose the tendon, I forcibly straighten the finger, which carries the flap with it; and when we approximate the parts, you see that the point of the flap occupies the position in which the base was a few moments ago. We will now treat the middle finger in the same manner, and secure the flaps in their new positions by means of interrupted sutures, and bring the edges of the wounds in the palm together as neatly as possible; then apply a splint with finger supports to the back of the hand and forearm, securing the phalanges to the fingers of the splint with adhesive plaster, and cover the wounds with carbolated oxide of zinc ointment.

[The after-treatment was carefully superintended, and in the course of a few weeks the child had good use of the first two fingers of its hand.]

IODIDE OF IRON AS A REMEDY IN INCONTINENCE OF URINE.—In the *Medical Times and Gazette* of December 17, Dr. John Barclay, after a very long list of the "constitutional, moral, mechanical, and specific" remedies and methods of treatment in this disease, says, "I have tried several of the above remedies, and, before I stumbled upon the syrup of the iodide of iron, found atropia or belladonna by far the most certain and trustworthy. Tincture of iron is much employed, but after frequent and persevering trials with it I have been always disappointed. During the past two and a half years twenty cases of incontinence of urine have been treated by me. The medicine invariably prescribed has been syrup of the iodide of iron alone, and, so far as I know, there have been no failures. I have notes of all the cases, but only eleven in the completed state, since the other nine, who came from a distance, did not return to say what was the result. The probability is that they were cured, otherwise they would not have been got rid of so easily. At all events, the eleven who did report themselves, or who were continually under observation, were all cured, the improvement in several of the cases following so closely upon the administration of the remedy as to leave no doubt that the good effect was due to the syrup. Dr. Manson, of Banff, and Dr. Smith, of Kinnairdy, have both found the medicine equally satisfactory. Dr. Smith says that he tried it, only a fortnight ago, on a boy, who for a long time had been a sad martyr both to diurnal and nocturnal incontinence, and who had resisted all other remedies, but who, upon giving him the iodide, was in two or three days almost well." The doses given were from fifteen minims to half a fluidrachm three times a day, according to age.

MIGRATION OF WHITE BLOOD-CORPUSCLES.—Dr. Caton, of Liverpool (*The Academy*, No. 17, for February 1, 1871), has contributed to *Humphry and Turner's Journal of Anatomy and Physiology* for November, 1870, the results of his examination of the blood-vessels of the mesentery of frogs, and corroborates in all essential points the observations of Addison, Cohnheim, Stricker, and others as to the escape of white blood-corpuscles through the walls of the smaller arteries and capillaries. Dr. Caton operated on nearly a dozen frogs in succession without seeing anything more than—first, a dilatation of the blood-vessels; secondly, a gradual retardation of the flow of blood till complete arrest occurred, the parts being always considerably congested; and, thirdly, a tendency of the white blood-corpuscles to arrange themselves on the inner surface of the vessels, presenting at the same time active amœboid movements. In no instance was the passage of blood-corpuscles through the vascular walls observed. Later, however, when operating, near the commencement of summer, on strong, healthy frogs, the migration of the cells was distinctly witnessed; and he gives sketches of the forms assumed by the corpuscles thus traversing the walls. He has not observed any migration of red corpuscles. Fish did not prove suitable subjects, but the migration process was observed in perfection in tadpoles.

INCONTINENCE AS A SYMPTOM OF RETENTION (*British Medical Journal*, January 21, 1871, p. 60).—Mr. Hutchinson gives several cases of incontinence associated with stricture. "It is easy to see," says this author, "how insidiously serious disease might in this way be brought about. In one of the cases alluded to, the patient had fatal disorganization of the kidneys induced before any obstruction in the urethra was suspected. So misleading is the symptom of incontinence to the patient himself, who never dreams that while his urine escapes freely there can be any accumulation, that it becomes of the greatest importance for medical men to be on the alert as regards it."

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EDITORIAL.

HABEAS CORPUS.

WE take the opportunity furnished by a recent occurrence to speak of an operation of law, involving at once the welfare of the helpless and stricken, the peace of families, and the honor and usefulness of the medical profession. What we are about to say may have no practical effect, but silence might be construed into willing acquiescence in a proceeding fit only to excite disgust and indignation.

Five or six weeks ago a writ of habeas corpus was issued by one of the courts of this city, for the purpose of procuring the discharge from the custody of the Pennsylvania Hospital for the Insane of the wife of a life-long resident in this community, known to everybody, as respectable, as honest, and as free from reproach as any other in it. She had been in that institution several years, the circumstances were well known to a large circle of relatives and friends, and no essential improvement in her condition had occurred. A case more free from suspicious circumstances could hardly be imagined; and of course the proceeding was well calculated to astonish and perplex all to whom the parties were known.

On the hearing, it appeared that neither the relator, as he is technically called in the legal forms, nor the gentleman whom he had induced to co-operate with him as counsel, had seen the lady, or been requested by her or by any friend or relative to institute this measure. In his return to the writ, Dr. Kirkbride stated that she had authorized no such step in her behalf, that she utterly refused to come to court, and that he was unable to bring her, except by main force, which he was unwilling to use. The court (Judge Allison) declined to proceed in the absence of the patient, and order was given that the corpus should be produced nolens aut volens. Accordingly, she was brought to the street, but positively refused to leave the carriage; whereupon the court, by mutual consent, directed the gentleman acting as her counsel, accompanied by the District Attorney, who happened to be present, to visit her and hear what she had to say. On their return, the counsel announced as the result of the interview, that he believed her to be sane on all subjects but one, and that he should abandon any further action in the case. Of course, the lady was remanded to the hospital; and then followed a round of explanations and apologies from the counsel, and of comments from the court, from which we may learn on what pretences the machinery of the law may be set in motion to abolish the most sacred rights of families, and how the parties concerned are expected to demean themselves under the operation.

In justification of his course, the counsel stated that, in order that he might not act without due warrant, he went to the hospital, accompanied by a female physician, for the purpose of seeing the patient and examining her mental condition; that his request for an interview was refused by the officers of the hospital; that subsequently, accompanied by his fidus Achates, the relator, he paid a visit to the husband, who, on learning their errand, ordered them out of the house; and, thereupon, that he was obliged, as a last resort, to apply for the writ. He acknowledged that he had conferred with no blood-relation of the patient, and the only reason he offered for supposing her to be wrongfully detained was that he had been told that her husband had told somebody else that he had shut her up because she spent too much money and refused to take the medicine that was ordered for her. Such were the grounds on which the gentleman saw fit to invoke the most prompt and potent agency of the law for annulling a measure that had been suggested by the best medical advice, and taken in strict conformity to the requirements of law.

Judge Allison, in his closing remarks, administered a gentle admonition to the officers of the hospital touching their refusal to allow an interview between the lady and the counsel. He intimated that members of the bar are entitled to privileges, by virtue of their calling, that might fairly be denied to others, and that a more indulgent practice on the part of the officers might save them from some trouble. Now, so far as this had reference to their general practice, it was without application, as this was the first case in the whole existence of the hospital where the privilege in question had been withheld. The freest possible intercourse has always been allowed between patients and persons claiming to be their counsel. It is only questionable whether the officers of the hospital have not too readily yielded to such demands, and thereby betrayed, in some measure, the sacred trust confided to them as guardians and protectors of their patients. Many of the insane have a mania for buying and selling, and engaging in various business transactions; and with a lawyer to help them, who may even be perfectly honest and mean no harm, they are enabled to embark in projects that seriously embarrass their fortunes. We have known some sharp practice of this kind within hospital walls. A better knowledge of the history of this case would have led the court, we suspect, to view the course of those gentlemen in a different light. This patient had been the subject of the same judicial process, some nine or ten months before, instigated by the same relator, who admitted then, as he did at this time, that he had never seen nor had any communication with the patient, though in his petition he had asserted just the con-

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trary. Of course, the judge dismissed the case with some remarks not very complimentary to the relator. A repetition of this impertinence, following so soon after the first, was very naturally regarded with little favor by the officers of the hospital. They felt, and very justly too, that their patients and their patients' friends have rights as well as members of the bar, and that a proper sense of self-respect forbade them to offer any facilities to a movement which was destitute of the least real foundation, and only calculated to annoy and disturb a lady intrusted to their charge. And even had they consented to an interview, and these persons had gone away satisfied that the patient was insane and a fit subject for a hospital, this would not have secured them against a repetition of the same meddlesome interference as soon as the relator could enlist some other "counsel" in his schemes.

The tendency of Judge Allison's advice is to encourage the very evil we are deprecating. Is it not equivalent to conferring on every lawyer in the land a sort of roving commission to roam at will through the wards of our hospitals in search of fitting subjects for the writ? The mischief that would thus be done—the agitation and distraction spread through a large establishment, the distress inflicted on those who, after exhausting the resources of affection, find themselves obliged at last, with sorrow and anguish of heart, to consign some loved one to the ministry of strangers—Judge Allison would deplore, no doubt, as much as any one; and we are sure it must have been through inadvertence that he offered the slightest encouragement to practices likely to produce such lamentable results. It seems to us there has been too much of this already,—enough to bring dismay into every household from which some beloved member has gone out for the benefit of such ministrations as only a well-managed hospital can furnish. Surely it is incumbent on those whose position gives them any influence in these matters to consider, not how they shall encourage it, but rather how it may be kept within the limits of decency. Within the last fourteen months, the writ has been served on Dr. Kirkbride five times, summoning him to appear in court with certain persons and show cause why the latter were deprived of their liberty. There was no more occasion for inquiry in these cases than in the three or four hundred others around them. In all but one, the process originated in the machinations of that same intermeddler who figured so prominently in the last. In the three cases that were heard to the end—for in the other two the proceeding broke down and the counsel withdrew—it was most satisfactorily shown that the patients were insane, and could nowhere else be rendered so comfortable as in a hospital. Some idea of the annoyance produced by these causeless proceedings may be gained from the fact that on eight or ten consecutive Saturdays, in one case alone, the officers of the hospital were obliged to transport themselves and their patient back and forth between the hospital and the court-room; and yet, after all this pother,—with testimony of witnesses, speeches of counsel, and judgments of the courts,—the patients were all remanded to the hospital.

One good at least has resulted from these transactions. They have proved a triumphant vindication of the institution from the charge of holding in custody persons not insane. Judge Allison was pleased to say that, on the strength of considerable knowledge of its management, he believed it to be free from all cause of reproach on that head. He might have said with equal truth that the record of every other hospital in the country is as fair as that; and we say here and now, that the vulgar notion of sane people being shut up in hospitals for the sake of their money, or for something worse, is nothing better than a bugaboo story for frightening children that have got their growth. It never had the shadow of a foundation, and originated solely in the distempered fancies of the insane themselves, who are unconscious of their infirmity, and can see no motive for their confinement but a bad one.

The judge took occasion to remark that the community is sensitive on this matter of confining the insane. Let us assure him that there is also a sensitiveness among the friends of the insane, far more worthy of consideration than the prejudices that have been engendered by novel-writers and itinerant lecturers. The tendency of these legal proceedings is to increase the reluctance naturally felt by families to place their insane members beyond their immediate control, and induce them, all the more strongly, to try every other means before sending them away, even that of keeping them in close confinement in their own homes; and that means, in a room stripped of its furniture, the windows screened and the doors battened, while the wretched patient, once, perhaps, the life and joy and pride of the house, is chained to the floor or tied to the bedstead. Let it be well understood that the writ is to be frequently issued, even on the most frivolous pretexts, and we may be sure that the proportion of recent cases admitted into our hospitals will be greatly diminished. Thus, the benefit of treatment in the early stage of the disease, when alone it is curable, is lost, and the patient drifts into that incurable condition which is beyond all the resources of art.

We do not suppose the evil in question will ever be entirely prevented so long as the world abounds with mischief-makers, but we believe it would be materially lessened by the exercise of a little more discretion and right feeling on the part of those who partake in the administration of the laws. The judges say they are obliged to issue the writ when it is called for,—that the law is imperative, and they must needs obey. We are aware that the act of 1870 declares that they *shall* issue the writ. In the original draft of the act, the "Project of a Law" submitted by the Medical Society of the State of Pennsylvania was followed, in which it was left to the discretion of the judge either to issue the writ or appoint a commission to make inquiry. At the last moment this was changed, and the existing provision, rendering the issue of the writ imperative, was foisted into the bill by some of those self-appointed apostles of

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human liberty who are always infuriated by the simple mention of insanity, like a bull at the sight of scarlet. It is not for us to gainsay the view which the judges take of their duty under the act of 1870; but, though silenced, we are not satisfied. The great writ was designed to relieve the oppressed and promote the cause of justice, not to heap affliction on those who have already more than they can bear. If used for the latter purpose, no act of the Legislature can debar the courts from saying so in unequivocal terms. A few rebukes like that uttered by Judge Paxson in the first abortive hearing of this case would greatly diminish this class of applications for the writ. In the present case, the judge intimated that he would be justified in throwing the costs upon the relator. If this were once actually done as well as threatened, it might have a most salutary effect if the party were amenable to such a penalty; but these people are generally as weak in purse as they are in intellect.

The writ is never applied for without the aid and counsel of some member of the bar. To those who are accustomed to make some account of the moral complexion of the causes they undertake,—and it is such only that we now address,—we would suggest that they make some preliminary inquiry before lending their aid in cases of this kind. Let them consider that to drag from his seclusion the poor victim of mental disease, already tortured beyond measure by apprehensions of coming trouble, and subject him to a judicial proceeding which, to his morbid imagination, would seem like a trial for a criminal offence,—a mistake the more easily made by finding himself surrounded by criminals, with the usual appendage of roughs and loafers always loitering about a court-room,—let them consider, we say, that this is one, though by no means the only one, of the wrongs they are liable to commit by precipitate action. They may always ascertain the essential facts of the case, if they really wish it. The friends of the patient, the physicians who gave the certificate, and the officers and managers of the hospital, would gladly supply them with all the information they possess. Of course, we suppose that they have some faith in human honesty; that they are not swift to believe that these different parties, with interests and feelings so diverse, and characters, probably, without a blemish, would join hands for the purpose of committing an infamous wrong. And if, after all, they are satisfied that there is ground for suspicion and a fair occasion for inquiry, let them bear in mind that they are not obliged to resort to the writ to accomplish this purpose. In this State, at least, the courts are always ready to appoint a commission who would visit the patient, hear the evidence, and report the results of their examination to the court. Thus, every rightful purpose would be answered, while the patient would be spared the exposure and publicity of a trial in a public court. By this course the right will be made to prevail, and no harm be done to any one. On the other hand, they may, if they please, spurn all compromise of their professional privilege, and wield the power which the law places in their hands, utterly regardless of the risk they run of doing more mischief than they can avert.

Here, then, is the alternative distinctly made, and it becomes a matter of serious consideration, both to the medical and legal profession, which branch of it they will choose. Are courts and counsel ready to sanction the course pursued in this case? Is it their belief that the statements of physicians respecting their patients are totally unreliable?—that the husband who puts his wife away from a home which for many years they had enjoyed together, in those waning years when life has but little else to please besides domestic joys, is governed, presumptively, not by an inexorable necessity, but by the paltry consideration of saving a few dollars? Are counsel willing to say that the idle gossip, the ill-natured remarks always floating about among the acquaintances of an insane person are ample ground for trampling upon the sanctities of the private circle, and dragging the wretched maniac from the quiet and seclusion of the asylum into the glare of a court-room, to be put upon trial like an indicted felon? Are they willing to assume the risk of dealing a fresh blow at a stricken circle, and of furnishing a distracted mind with new occasions of excitement and apprehension? All this they may say and do, if they please. On a strict construction of their professional rights, they may legitimately avail themselves of every means which the law places at their disposal, disregarding every consideration but that of promoting the schemes of their employers. They may do it,—as we would fain believe was done by the counsel in the present case,—not for the purpose of committing an intentional wrong, but with the idea that they are vindicating the majesty of the law by triumphing over all the devices of professional ingenuity. Let them remember, however, that, by whatever motives they may have been governed, they render themselves fully responsible for the consequences of their action. If that is precipitate, ill advised, arbitrary, reckless, then no allowable construction of their rights can prevent any mischief that may ensue from being justly laid at their doors.

THE PENNSYLVANIA HOSPITAL.

THERE is no other institution in Philadelphia in which the interests of the medical profession have centred for so long a time as the Pennsylvania Hospital. Foremost among its founders was a physician, and its prosperity ever since its establishment has been largely due to the interest which the profession of this city has always manifested for it. In less than twelve years after its corner-stone was laid by Benjamin Franklin, a course of clinical instruction was given by Dr. Thomas Bond in the wards of the hospital; and there is reason to believe that even earlier in its history students in physic followed the practice of the attending physicians and surgeons. It is certain, however, that from 1766 down to the present time clinical lectures have been given with more or less regularity,—a period extending over

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more than a hundred years, and longer than that during which medical lectures have been delivered in any other building, and, we may add, institution, in the country, with the single exception of the University of Pennsylvania, which has precedence in this respect only in consequence of its fusion with the College of Philadelphia in 1791. The prosperity of Philadelphia as a seat of medical teaching has been largely owing to the excellence of the clinical instruction given at the hospital, and the graduates of her schools have always recalled with pleasure the time spent within its walls. With such pleasant recollections of its greatness, we cannot look with equanimity or indifference upon its present decline in popularity with students.

In the early part of November, 1869, nearly five hundred tickets were sold, and we are told that on one or two occasions that number of students actually assembled in its amphitheatre,—constituting, it is believed, the largest class in attendance upon clinical lectures in the world. During the past winter less than two hundred students attended the clinics. Why has this change occurred? More favorably situated than any other hospital in the city, within ten minutes' walk of the two great schools of medicine and of the homes or boarding-houses of the students, with precisely the same medical staff, many of the members of which are popular teachers, and affording opportunities for clinical study unsurpassed elsewhere, the change since last year seems incomprehensible.

We can only regard it as one of the results of the action of the contributors to the hospital, who, at their last annual meeting in May, practically decided that the medical staff, comprising the only officers of the hospital who are at all fitted to decide questions pertaining to medical teaching, should have no voice in determining them. We know that it is a prevailing impression in the community that students are deterred from coming simply because women are now instructed in its wards. This petty feeling has, we know, no existence. Nor was there at any time any desire on the part of the students to prevent women from studying medicine, although this has, time and again, been asserted. The position which they took last year—and we have never seen it successfully assailed—was that clinical instruction should not be abridged in consequence of the presence of women. The tickets had been bought with the implied, if tacit, understanding that the cases exhibited and lectured upon should be as varied as they had always been, and the disturbances which took place upon the appearance of the students of the Women's Medical College were in great measure due to the ill-advised announcement which was made to the class that cases of venereal disease, or those involving exposure of the person, could no longer be shown.

There is a point which seems to have been systematically ignored by the advocates of Women's Rights, and that is, that there is no necessity now, nor has there ever been any, for women who desire to be instructed in clinical medicine to attend hospitals in which male students are taught. The Women's Medical College is situated in a part of the city unprovided with a dispensary, with the exception of the one attached to it. During the time it has been in existence, dispensaries have started up in other parts of the city, and have attracted a large number of patients. The hospital attached to the women's college has also, within the past few years, been the object of liberal bequests, and, with the interest which is manifested in it, there ought to be no difficulty in procuring such a subscription-list as would insure its permanent success. Why, then, should women continue to force themselves upon teachers who are not interested in their progress, and who can see already, in this attempt to force them into a profession for which they are not especially fitted, the foreshadowings of failure?

The mere paucity of the attendance upon the regular lectures of the Pennsylvania Hospital is not the only evil in the present condition of things there. If the class, poor as it is in numbers, was made up of the students of either of the scientific medical schools of the city, the lecturer would at least have the satisfaction of feeling that he was casting seed where it was likely to grow and bring forth good fruit; but we are told that the large majority come from the Homœopathic and so-called Eclectic Colleges,—for what purpose we cannot imagine, unless it be to acquire a right to the certificate of the hospital, which we have reason to believe is not unfrequently made to pass for a diploma, although it is simply a certificate that the student has attended a course of clinical instruction, and may be had without an examination, on the payment of five dollars, by any one who has already bought the hospital ticket.

In other countries the attending physicians to hospitals are remunerated; but in this city and country their services are given gratuitously. Even the money realized from the sale of tickets is, by virtue of long-established usage, appropriated by the Managers of the Pennsylvania Hospital to the maintenance of the library, the fees having been originally relinquished by Dr. Bond and his colleagues for this purpose. This, it seems to us, is an unanswerable argument in favor of the propriety of consulting the medical staff in all matters pertaining to clinical teaching, and of taking its views and feelings into consideration.

In the boards of management of two other of the principal hospitals in the city, physicians have been found most useful and efficient members,—active not solely in carrying out the desires of the medical staff, but also in promoting the comfort and well-being of the patients.

The names of physicians may also be found among those of the earlier managers of the Pennsylvania Hospital; and we are at a loss to know what good reason there could have been for the abandonment of this custom,—especially since there are in our profession gentlemen whose knowledge of hygiene and of the kindred sciences would render them valuable accessions to the Board.

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TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

At a meeting of the Pathological Society, held Thursday, March 9, 1871, the President, Dr. John Ashhurst, Jr., in the chair,

Dr. Ashhurst read a paper on *Rupture of the Lung without Injury of the Thoracic Parietes.* (See current number of *The Medical Times.*)

Dr. G. C. Harlan referred to a similar case reported by him at one of the early meetings of the Society,—that of a child who was run over by a wagon. Here the rupture was at the apex of the lung. There was great emphysema, but no fracture of the ribs.

Dr. E. B. Shapleigh said he was familiar with the case reported this evening, and that it had been a matter of interest as to how the patient met with the injury. The lieutenant of police had seen him in apparent health at six o'clock in the evening, so that the injury must have been received between this time and the hour at which he was found the next day. He was also seen to use his right arm at the tavern in the evening.

Dr. W. W. Keen presented the *larynx* and portion of the *trachea* of a child, 3½ years old, upon whom *tracheotomy* had been performed. He first saw the child on the evening of February 28, with unmistakable evidences of pseudomembranous croup. The condition of the child becoming alarmingly aggravated, a consultation was held, in which it was decided to perform tracheotomy. This was accordingly done at 6 P.M. of the following day.

During the operation the only layers recognized, besides the fasciæ, were the muscles and the thyroid veins. No appreciable isthmus existed in the thyroid gland, but two large and turgid veins were seen, one on each side of the median line, just in front of the trachea. A hook having been inserted between them, the trachea was opened, and the tube inserted without further difficulty. During the night brandy and beef-tea were given, and the tube kept open by a feather and a swab on a small piece of whalebone. In spite of this, however, the child's respiration grew rapidly worse, especially after midnight; she gradually sank, and died at 8 A.M., fourteen hours after the operation.

No post-mortem examination further than of the neck was obtained. The larynx and trachea were removed. They were both lined with the thick, tenacious, false membrane, especially the interior of the larynx, and the vocal chords. Around the incision the membrane was removed by the friction of the tube, exposing a highly-inflamed mucous membrane. The false membrane doubtless extended down into the bronchial tubes, as was evinced by the increasing dyspnœa, while the tube was still free, and by its existence low down in the trachea. Its extension in fourteen hours or less to such a degree is worthy of notice, in reference to the prognosis and treatment.

Dr. James Tyson presented for Dr. Wm. Carroll a *chronically-enlarged testicle*, removed by the latter gentleman from an apparently healthy laborer, aged 35, who had gonorrhœa in 1855. He had no trouble in his testicles until March, 1870, when both became swollen, apparently from non-specific causes, the patient alleging that he had had no venereal disease since 1855. Both testicles have since remained chronically enlarged, the right, still remaining, being larger than the left, which was removed about February 22. The skin over the left sloughed extensively, allowing the testicle to protrude. The edges of the scrotum, however, had a tendency to heal.

On March 1, the patient applied to Dr. Carroll for treatment. Finding the testicle quite disorganized, the doctor removed it three days later. The testicle was dissected from its surroundings by the fingers, the cord ligated en masse after the manner of Velpeau, and the organ subsequently detached. There was almost no loss of blood during the operation, and no pain after it. The wound is closing very rapidly.

The specimen was referred to the Committee on Morbid Growths, who reported, March 23, as follows:

"The testicle presented to your committee for examination, is enlarged, and bound by numerous firm adhesions to the tunica vaginalis, so that the serous sac formed by that membrane is almost obliterated. In it are several well-defined yellowish nodules, some as large as a filbert. These portions, when a section of them is placed beneath the microscope, are seen to be in a state of granular degeneration, and at their outer boundary is a rapidly-proliferating fibrous tissue compressing the seminal tubules. From the toughness of these nodules, from their seat,—all in the gland proper and not in the epididymis,—as well as from the microscopic appearances above detailed, your committee believe that the above-mentioned nodules are syphilitic gummata."

Dr. E. B. Shapleigh presented a *tumor of the anterior mediastinum*, with the following history:

Arthur B., house-carpenter, aged 42, died suddenly on the 24th day of last January. Some of his relatives, suspecting death from poison, sent the proper affidavit to the coroner. An investigation was commenced and a post-mortem examination ordered.

I could obtain only a very meagre history of the case. He had always enjoyed excellent health, with the exception of an occasional headache; was constantly at his work; had never complained of pain or other uncomfortable feeling about the chest. As far as I could learn, he had never had occasion for medical assistance since childhood.

Between 4 and 5 o'clock P.M. he left his work and went home. He said that he felt very ill,—had a severe headache. He retired early. Between 9 and 10 o'clock he vomited frequently. He became greatly prostrated, and died without having received any medical aid.

The autopsy was made on the following evening. On removing the sternum and cartilages, this tumor was found in the anterior mediastinum, occupying the usual position of the heart. It covered entirely and was attached to the anterior portion of the pericardium. The heart was somewhat flattened and forced backwards and to the left. It was smaller, and its walls much thinner, than normal. It was quite free. There was no pericarditis. The stomach, liver, lungs, intestines, spleen, and kidneys were in a normal condition. Brain not examined.

I have made no minute examination of the structure of this morbid growth; probably it is an enlarged and diseased thymus gland.

A case similar, but differing in some important particulars, is published in the twenty-first volume of the Transactions of the Pathological Society of London, page 358, under the head of "Lympho-Sarcoma (or Lymph-Adenoma) of the Anterior Mediastinum."

The specimen was referred to the Committee on Morbid Growths, who reported, March 23, that they believed "it to be a sarcoma of the mediastinum, of that variety designated by Virchow as lympho-sarcoma. Sections of it placed beneath the microscope showed round cells of the size and appearance of lymph-corpuscles, together with numerous free nuclei,—all imbedded in a very fine fibrous reticulum. Owing to the large size of the growth, it is very difficult to ascertain its starting point, whether from the bronchial glands, or from the remnants of the thymus. In none of the sections, however, could we find any other structure than that of the sarcomatous growth above described."

Dr. H. B. Hare exhibited specimens including *medullary cancer of the cervix uteri, posterior vaginal cul de sac, left ovary, and neighboring lymphatic glands; fibrous tumor of the uterus; dropsy of the left Fallopian tube,*—from a woman aged 60, who died in the Episcopal Hospital, Feb. 21.

The lungs were healthy. The mitral orifice of the heart was somewhat contracted; one leaflet was capable of nearly closing the entire orifice, while the other was replaced by a few vegetations. The liver was fatty, and weighed four pounds. The spleen, kidneys, rectum, bladder, and right ovary were normal.

The specimens were referred to the Committee on Morbid Growths, who reported, March 23, as follows:

"The cervix uteri and posterior vaginal cul de sac are the seat of an extensive deposit of medullary cancer. The fundus and body of the organ are free from disease. The cavity of the

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uterus is somewhat dilated, and occupied by a globular fibrous tumor, about the size of a walnut, having its origin from a narrow pedicle near the right Fallopian tube, which, with its corresponding ovary, was normal in appearance.

"The left Fallopian tube was exceedingly tortuous in its course, and distended with fluid, its lumen being constricted near its passage into the uterus, while the fimbriated extremity embraced the ovary, to which it was adherent.

"The left ovary was enlarged, irregular in outline, and, on section, an opaque fluid could be made to exude, consisting, under the microscope, of polymorphous cells, with large nuclei. When the structure of the ovary was examined microscopically, it was found to present the characteristic marks of carcinoma,—viz., a stroma formed by trabeculæ of connective tissue enclosing alveoli filled with closely-packed cells of an epithelial habitus."

DR. HARE also presented a specimen of *cirrhotic liver*, presenting an unusual configuration, the whole organ being of a shape not unlike that of a dog's tongue.

DR. W. G. PORTER presented a specimen of *dissecting aneurism of the ascending aorta*, removed from Phœbe R., a colored woman, about 70 years of age, whom he saw in the service of the Philadelphia Dispensary. When first visited, she was sitting in bed, propped up by several pillows, and complained of palpitation of the heart, shortness of breath, and œdema of the lower extremities. She could give no history of her case; had no family from whom it could be obtained. The woman who occupied the adjoining room said that she had been able to work until about three weeks before, and that she had never known till then that there was anything the matter with her. On percussion, the heart was found to be increased in size. Auscultation revealed a loud, musical murmur over the base of heart and at the aortic cartilage. She was very weak, suffered much with shortness of breath, and for a day or two had been troubled with diarrhœa. The examination was, therefore, not so thorough as it should have been. On the following morning she was found dead in bed.

The post-mortem examination was made on the 23d of February. On opening the pericardium, it was found filled with blood, partly coagulated, and about a pint and a half in amount. The whole heart was increased in size, and the left ventricle was very much hypertrophied. There was an aneurism of the aorta, the opening into which was situated a short distance above the aortic valves. The aneurism was, unfortunately, cut across in taking it out. A rupture of the outer aneurismal wall into the pericardium had occurred, and the vent was almost closed by a partially-organized clot. The aorta was extensively ulcerated, and through one of the ulcerated patches the original rupture had occurred. There were also a few isolated patches of calcification in the aorta.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting, held March 8, 1871, Dr. A. H. Fish, Vice-President, in the chair,

DR. H. Y. EVANS read a paper on "The Hypodermic Employment of the Sulphate of Morphia, in fifty distinct cases." In not one of them had it ever previously been used. Twenty-three were males and twenty-seven females. The ages varied from twenty to fifty years. The average length of time required by the morphia to produce *positive* effects was twenty minutes, which, when a full dose was employed, lasted from three to five hours.

The heart's action, as indicated by the increased rate and volume of the pulse, was influenced in twenty-five minutes. The rate was generally increased ten pulsations per minute, and continued thus for over an hour.

The increased temperature of the body at the armpits was from 1 to 1½ degrees. This increase was quite constant in chronic and debilitated cases.

In five instances only did the morphia entirely fail in producing its usual results. These were men accustomed to the free use of alcohol.

The younger and weaker the patients, the more susceptible were they found to be to its influence, and females were more susceptible than males.

This mode of using the remedy becomes a perilous one when the patient is under twelve years of age. There is also extreme susceptibility to morphia in organic disease of the kidneys; so small a dose as one-sixth of a grain may, in such cases, produce the most alarming narcotism. In two instances there were evidences of a cumulative effect, symptoms of narcotism coming on five hours after the introduction of the morphia. These were mania-a-potu cases.

In neuralgia and other painful conditions, the nearer the seat of the pain the application was made, the more prompt was the relief: inexplicable as this may be, it was nevertheless, in the speaker's experience, true.

His experience convinced him that the best plan was to dissolve the morphia at the time it was needed. If the action was desired to be prompt, he dissolved the drug in twenty drops of water; but if, on the contrary, it was desired to be slow and long-continued, as in chronic cases, he used but ten drops of the water, and injected, when it was possible, while the salt was merely mixed, and before it was thoroughly dissolved. He thought that in this way we could often gain a much longer continuance of its effects.

DR. TURNBULL, being called upon by the President, said he had little to say except in confirmation of the results obtained by his friend. He wished, however, to give a word of caution to the younger members as regards the dose. It is well to begin with a small one, say not more than one-third of that ordinarily employed internally; and in order to keep up its physiological effect but slight increase is necessary. He did not agree with his friend in the belief that localization of the injection was necessary. He had found his best results follow injections made in the arm over the insertion of the deltoid muscle, selecting the loose and delicate skin.

In certain individuals, abscesses will sometimes follow. There also occurs, occasionally, a hardening of the tissues around the point of insertion, which remains for some time. This, however, is rare, but in one or two instances the speaker had been compelled to paint the parts with tincture of iodine. Some also suffer from headache, confusion of mind, anorexia, nausea, vomiting, etc. He has not found abscess so frequent since the employment of the freshly-prepared solution. He therefore carries the sulphate of morphia in packages of ⅛, ⅙, ¼, and ½ gr., and dissolves it in warm water. He supposes that the deposit of fungi ("penicillum") may have had something to do with producing irritation, as Eulenberg employs the hydrochlorate of morphia, with hydrochloric acid, to prevent this formation.

The use of morphia by the mouth or hypodermically may engender a habit almost as difficult to overcome as the use of alcohol. Most distressing cases have been recorded by Dr. Parrish of Media and Dr. Gibbons of San Francisco. The injections must be carefully reduced in strength without the knowledge of the patient; and Dr. Bartholow recommends the addition of a minute proportion of atropia to the morphia injection, until the effects of the former preponderate. When the patient begins to complain that the injection has lost its peculiar influence, then we may stop almost altogether. The most difficult cases to cure are those in which the syringe is employed by the patients themselves; and for such there is no treatment to be recommended short of actual confinement in an asylum or elsewhere.

DR. EVANS said he had seen but two cases of vomiting directly resulting from this mode of using morphia, but he had frequently and successfully used it to stop vomiting in cholera morbus. He thought that abscesses might originate from a want of cleanliness of the instrument. He considered ½ gr. a heroic dose, which should be exceptional, while ⅙ to ¼ gr. should be ordinarily administered. He never employed the permanent solution, preferring the packages. Especially did he avoid using even as much as half a drachm of water as a solvent.

DR. GOODELL remarked that he used the sulphate of morphia, and carried it in substance, in order to avoid its decomposition, always injecting the required dose in a syringeful of water. In his opinion, this dilution prevents the formation of abscess, for he had never seen more than one resulting from any kind whatever of hypodermic injection, and that one was

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due to a solution of belladonna extract, made extemporaneously to meet an emergency. The after-nausea generally yielded promptly to small doses of chloral.

In answer to a question, Dr. G. stated that most of the forms of dysmenorrhœa are relieved during the attack by morphia, given either by the mouth or hypodermically. This could be explained by the threefold action of opium, for it is the best of narcotics, the most efficient relaxant of a rigid cervix, and an excito-motor of uterine muscular fibre,—properties which meet many of the indications in dysmenorrhœa. In the congestive variety, in which the womb throbs like a headache, found usually in fat and plethoric women, chloral with hip-baths answered far better during the attack; but in the intervals the iodide of potassium, saline cathartics, and scarifications of the cervix are of great advantage. On the other hand, the effects of full doses of morphia are peculiarly happy in those nervous and neuralgic varieties of dysmenorrhœa so often met with in pale, thin, tall, and hysterical girls. The menstrual fluid accumulates in the cavity from a spasmodic closure of the internal os uteri, and escapes in gushes at such times alone as the expulsive pains overcome the resistance of such constriction. Opium is here the remedy *par excellence*, for it not only lulls the pain, but also takes away the cause of this pain, by softening down and relaxing the rigid cervix.

Dr. Lee stated that some years since he had had occasion to employ this mode of medication in the case of a very anæmic woman, upwards of sixty years of age, for severe paroxysms of gastrodynia. Relief followed in less than five minutes, and as the injections were made over the epigastrium, he thought this case supported the view of Dr. Evans, that relief was procured sooner, the nearer the point of insertion was to the seat of pain. In reference to the doctor's statement that its use is dangerous in children, he mentioned that a few days before he had used it in the case of a little girl, seven years of age, while under the influence of chloroform, administered for the purpose of reducing a dislocation of the hip of several months' standing, and for breaking up adhesions in the knee-joint. The dose was one-sixth of a grain of the acetate of morphia. It appeared to have so little effect that it was found necessary to give the sulphate subsequently by the mouth before the pain was quieted. In regard to the question of abscesses following its use, he thought that in some persons there seemed to be a constitutional tendency to this result, and instanced a case of so-called spinal irritation in a lady seen in consultation with an eminent practitioner, who had been employing this means for her relief. The patient's arms were quite covered with minute abscesses in every stage of development, and her physician had found it necessary to discontinue the remedy on account of the annoyance which they caused.

Dr. Stetler had never seen an abscess from hypodermic injection, and thought it resulted from wounding some of the subcutaneous tissues. He injects where the skin is thin and loose. He thought it should never be used in the nape of the neck. He had frequently seen nausea and vomiting from the hypodermic use of morphia. In those cases in which it has these effects, it would probably have the same if given in full doses by the mouth. In his own case, a sixteenth of a grain, administered every three hours, nauseates, and, if persisted in for any length of time, vomits. Used hypodermically in his own case, in full doses, it does not nauseate.

Dr. Buck said he had relieved his patients more promptly by the use of a half drachm of chloroform mixed with syrup of ginger and an amount of morphia proportional to the severity of the pain. He had found the chloroform to give almost instant relief, and by the time its effects had passed off, the morphia had been absorbed. His prescription is,—

Morph. Sulph., gr. i;
Chloroform., ʒii;
Syr. Zingiber., fʒii.

S.—A teaspoonful every five minutes until relieved.

Arnica in Pneumonia.—Mr. C. C. Balding recommends strongly (*London Lancet*) the use of arnica (min. x strong tincture every two or three hours) in pneumonia. The pulse should be reduced by it to 60 or 70, and descends at times as low as 40 per minute. The relief is immediate, and marked.

BIOLOGICAL AND MICROSCOPICAL SECTION, ACADEMY OF NATURAL SCIENCES.

At a conversational meeting, held March 6, 1871, S. W. Mitchell, M.D., in the chair,

Dr. J. H. McQuillen, the Corresponding Secretary, presented photographs of the test-diatoms Surirella gemma (the latter exhibiting 91,000 striæ to the inch), from Colonel J. J. Woodward, of the Army Medical Museum at Washington, and moved a vote of thanks for the same, which was carried.

Dr. McQuillen also exhibited half a dozen microscopical slides, handed to him by Dr. R. W. Varney, of New York,—viz.: 1. Transverse section of the maxilla of a cat, with the incisors, canines, and molar teeth in position. 2. Nodule of secondary dentine. 3. Section of hypertrophied root of a molar tooth. 4. Hemipterous insect (Tingis arcuata). 5. Longitudinal section of a deciduous incisor; and, 6, of a molar tooth.

The doctor directed attention particularly to the last-named specimen as of practical importance, bearing upon the diseases and treatment of the teeth. Under the microscope, a fissure, inappreciable to the naked eye, could be seen passing through the enamel, and enlarging into an oval cavity near the junction with the dentine; also a number of interglobular spaces in the dentine, in close proximity to the fissure in the enamel.

This fissure and the interglobular spaces being due to defective formation are therefore *predisposing causes* of decay. While such a fissure would be inappreciable to the naked eye, a delicate probe would readily pass into it, and a tooth found in such a condition should be filled immediately, so as to prevent the development of caries; for so long as acids, decomposed food, and other *exciting causes* are prevented from coming in contact with the defective dentine, the *predisposing* cause remains dormant. This specimen clearly demonstrates the importance and necessity of promptly filling the small cavities found in the depressions on the grinding, buccal, and lingual surfaces of the bicuspids and molars, and on the palatine surface of the incisors and canines.

REVIEWS AND BOOK NOTICES.

The Health and Wealth of the City of Wheeling, etc. By James E. Reeves, M.D., City Health Officer, etc. Second Edition. Baltimore, 1871. Pp. 158.

It would be well for the people of other cities if questions of public hygiene were placed in the hands of such reliable and well-informed health-officers as the gentleman who occupies that position in the thriving town of Wheeling. We do not know if politics regulates the appointment of these officials in West Virginia, as it does elsewhere, or whether, as in some of our large towns, the man seeks the office, rather than the office the man; but we do know that the health of the people is often shamefully neglected through want of foresight, knowledge, and precaution of the very men to whom its preservation is intrusted. Dr. Reeves devotes, in this report, several pages to the consideration of the natural resources of West Virginia, after which he turns his attention to Wheeling, in the very heart of which "whole blocks are built on the site of former swamps, deep ravines, ponds, and sink-holes," and "a considerable part of which originally was but little better than a quagmire." He gives a clear and concise account of the sewerage, drainage, and water-supply, and strongly condemns the use of galvanized iron pipe for conducting water for culinary purposes, the interior coating of which is in a few hours decomposed, forming poisonous salts, oxide, carbonate, and chloride of zinc. Twenty-eight pages, including sixteen of illustrations, sectional drawings, etc., are devoted to the "advantages of the earth-closet." Gas, kerosene, slaughter-houses, manufactories, alimentation, infant feeding, criminal abortion, hospitals, and a dozen other subjects of public interest, also receive ample justice. In fact, there is nothing connected with the material, social, hygienic, or sanitary aspects of Wheeling that is not here presented and very ably discussed. Let the health-officers of cities peopled with their hundreds of thousands imitate his good example!

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THE "RUBBER AIR-CUSHION" in the Treatment of Complicated Fractures and other Serious Injuries of the Lower Extremities, with Illustrative Cases. By L. D. MASON, M.D., Adjunct Surgeon to the Long Island College Hospital. Reprinted from the *New York Medical Journal*, December, 1870. 8vo, pp. 12. New York, D. Appleton & Co., 1870.

In this paper, which was originally read before the Long Island College Hospital Association, October 4, 1870, the author directs the attention of the profession to the use of the rubber air-cushion in the treatment of complicated fractures and other serious injuries of the lower extremities. Two cases —one a compound fracture of the leg involving both bones, and the other a compound dislocation of the ankle-joint—are reported, in each of which sloughing of the integument had occurred from pressure, and which were markedly benefited by treatment with this apparatus. It is very simple in its construction, and consists of an air-cushion made of india-rubber, in the shape of a small pillow, of the proper dimensions, to suit the individual case. A flexible rubber tube, about two feet in length, is inserted into the middle of the side of the cushion, its free extremity being guarded by a screw-valve. In order to prevent overheating of the limb, the cushion is covered before application with a stout muslin slip, between which and the surface of the cushion is placed a layer of cotton-batting, a sheet of spongio-piline, or some material of this character.

It can be applied to the limb, placed either in the fracture-box or in the lateral splints; and in each case the pressure can be regulated by the extent to which the cushion is inflated. When it is required, passive motion can be instituted by the inflation and exhaustion of the cushion. It affords uniform support to all parts of the limb, and is particularly adapted to cases in which it is desirable to employ irrigation. We believe that the air-cushion will commend itself to surgeons as a very useful application in injuries of the lower extremities, complicated by severe contusions and lacerations of the soft parts, in which uniform support is desirable, not only for the purposes of treatment, but also for the comfort of the patient.

MATERIA MEDICA FOR THE USE OF STUDENTS. By JOHN B. BIDDLE, M.D. 8vo. Philadelphia, Lindsay & Blakiston, 1871.

This book belongs to a class with which we confess to a total want of sympathy,—the so-called students' hand-books,—short cuts to knowledge,—at once the outgrowth and expression of the American feverishness to "get on,"—the symbols and signs of the great curse of American medicine, the too general belief that deep study and wide knowledge are of but little use in practice; and that whereas from three to five years are requisite for the training of a house-carpenter, one or two are ample time in which to become well skilled in medicine.

We have never closely examined previous editions, but the present is said to be "much enlarged," and is a volume of nearly four hundred pages,—space enough in which to elaborate a treatise of some value on the subject; but the large print, the waste of room in stale, useless wood-cuts, the lack of great condensation, all combine to reduce to a minimum the amount of matter really contained in the volume.

The history, physical properties, and chemistry of the various drugs are meagre enough, but not too meagre to be open to the charge of inaccuracy. To substantiate this, we will simply allude to atropia, castor-oil, and the carbonates of potash. From the account of the first of these, the student would be led to think that the sulphate is not officinal, and that the proper way to make a collyrium is to dissolve the alkaloid itself in water and alcohol or acetic acid. Whereas every one knows that years ago the sulphate was made officinal because it is soluble, and therefore can be used in collyria without the aid of other menstruum than water. Heat, it is said, should not be used in preparing castor-oil, as it renders it rancid! Whereas, in truth, heat is always used in making castor-oil,—even the so-called cold-expressed oil. A high temperature, above 212°, is probably meant, but not expressed.

There are officinal in the U. S. Pharmacopœia three preparations of carbonate of potash,—potassæ carbonas impura, potassæ carbonas, potassæ carbonas pura; the two former containing silicic acid as an impurity, the latter being free from it. No student will ever learn these facts from the pages of the book before us.

Time and space are wanting in which to point out further illustrations of the inaccuracy of the materia medica proper of the book; but it is the therapeutics of the work which especially has astonished us. Close gleaning might enable the student to obtain a large proportion of the essential facts of materia medica from the volume; but study he it ever so closely, studying it *alone*, he must remain utterly unacquainted and hopelessly out of sympathy with modern therapeutics. *O tempora! O mores!* Eighteen lines for the description both of the physiological action of opium, in minute and large doses, and of the symptoms of its poisonous effects!

Moreover, the therapeutics is often inaccurate to the very verge of falsity. Take belladonna,—one of the best known and most closely studied of all our drugs. We quote the passage: "In small doses the effects of belladonna are those of an anodyne narcotic, with little or no action on the circulation, or on any of the secretions, except a peculiar dryness of the mouth and throat. In larger doses it causes dilatation of the pupils," etc. Now, one of the most prominent effects of the administration of belladonna is the great stimulation of the circulation. Nowhere is this mentioned, and, from the above passage, any student would, we think, justly draw the conclusion that it had no such power. We have found in the book much to blame. Is there nothing to praise? Yes: it is a comely volume, and the English of it is fairly good, excepting in the repeated use of the noun alkaloid as an adjective, instead of alkaloidal.

BOOKS AND PAMPHLETS RECEIVED.

Insanity and its Treatment. Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. Fielding Blandford, M.D. Oxon., etc. etc. With a Summary of the Laws in Force in the United States on the Confinement of the Insane. By Isaac Ray, M.D. 8vo, pp. 471. Philadelphia, Henry C. Lea, 1871.

Minnesota as a Home for Invalids. By Brewer Mattocks, M.D. 12mo. Philadelphia, J. B. Lippincott & Co., 1871.

Woman as a Physician. By J. P. Chesney, M.D.

First Annual Report of the Trustees of the New York Dispensary for Diseases of the Skin.

Report of the Board of Health of the City Chicago for 1867, 1868, and 1869, and a Sanitary History of Chicago from 1833 to 1870. 8vo, pp. 330. Chicago Lakeside Publishing and Printing Company, 1871.

GLEANINGS FROM OUR EXCHANGES.

PHOSPHORUS POISONING.—Dr. Max v. Schleiss-Löwenfeld (*Neues Repertorium für Pharmacie*, January, 1871) reports a case of a woman, 28 years old, who, two days (January 28) before coming under observation, had taken, with suicidal intent, the shaved-off heads of three packets of matches. When first seen, pulse was 100, weak; temp., 37°.2 C. Tongue deep red, dry. Abdomen excessively tender in left hypochondrium. She complained of feeling cold and of intense gastric pain. The following day icterus set in, as well as intense pain in right hypochondrium. She had two bright-yellow diarrhœic stools, with tenesmus. Pulse, 128; temp., 36°.6 C. Liver of normal size. She complained greatly of hunger. Feb. 1.—Icterus more general. Pulse, 130; temp. (morning), 40°.2 C.,—(evening), 37°.0 C. Intense hunger. A hard stool, with great constant tenesmus. Great prostration. Feb. 2.—Pulse, 96; temp., 37°.0 C. Great pain in hepatic region. Epistaxis. Two stools, scybalous, with yellow liquid and bloody slime. Feb. 3.—Hepatic pain intense. Bloody discharges from nose, stomach, bowels, and genitals, followed by unconsciousness, collapse, and death in the evening,—five days after taking of poison.

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Post-mortem.—Dura mater yellow. Heart normal size, very pale. Interior of arteries deep yellow. Left lung œdematous and deeply congested. Liver markedly diminished in size, with a yellow shining section; very fatty and bloodless. Gall-bladder very small; contains only a little grayish mucus. Spleen large, friable. Stomach with some ecchymosis. Small intestines—mucous membrane swollen, very hyperæmic. Lower portion of large intestine the seat of acute catarrh, with marked ecchymosis.

Microscopic examination.—Epithelium of mucus in gall-bladder and of stomach full of fat molecules. Liver-cells rarely distinguishable; exceedingly fatty. Of the fibres of the musculo-frontalis and psoas with their primitive bundles, some are perfect and distinctly striated, others obscured by numerous internal fat molecules, others contain great fat drops. Heart-muscle largely undergoing fatty degeneration. Spleen, no signs of fatty degeneration.

Both kidneys large, with a pale yellow fatty section. Epithelium swollen, with rounded contour, full of fat-globules.

Abscess of the Mastoid Cells cured by Operation (*British Medical Journal*, January 28, 1871, p. 88).—A female, aged 40, after suffering for eleven months from abscess of the mastoid cells,—during which period hemicrania and general neuralgia of the fifth pair were prominent symptoms,—submitted to the operation of trephining over the mastoid process. The case was under the charge of Dr. F. Buszard, who, in describing his method, says, "I exposed the bone fully by a crucial incision, cutting through the attachment of the sterno-mastoid muscle. A probe was passed through the mastoid foramen, and was found to communicate with the abscess. Pus had been drained off by this opening throughout the history of the case. A small trephine was placed over the foramen, and the outer table of bone removed. At least an ounce of pus escaped. The cavity was then scraped, until the dura mater was reached." The patient made an almost uninterrupted recovery.

Locality of the Sense of Taste.—Dr. Camerer, in the *Zeitschrift für Biologie*, publishes the results of experiments on nine persons, with a tube of about a third of an inch in diameter pressed over different parts of the tongue, into which solutions of salt, sugar, sulphuric acid, etc. were poured to a small height. The gustatory sensibility was found to be seated in the fungiform papillæ, and not in the mucous membrane, and not at all in those portions of the tongue which were devoid of papillæ.

Sulphites in Pyæmia.—Dr. Wm. MacCormac (*British Medical Journal*) says, "Some time ago I had frequent opportunities of trying Prof. Polli's antizymotic treatment by the bisulphites of soda or magnesia. It always appeared to me to do a good deal of harm, and never much if any good. Diarrhœa was induced by it, as well as vomiting, the abdomen swelled up with flatulence, and food was sooner refused."

Permanganate of Potash in Gonorrhœa.—Dr. Thos. Narden commends this drug (*London Lancet*, Dec. 1870) as an injection (gr. v—xv to ℥i) in this disease. Great care should be taken to have dish and syringe clean.

Leeches and Mustard.—A correspondent in the *London Lancet* states that the application of mustard previous to the application of leeches causes them to take hold with great rapidity and avidity.

MISCELLANY.

We are very glad to hear that Baron Liebig is sufficiently recovered from his recent illness to resume his lectures, and very sorry that the health of Mr. James Paget is causing much anxiety to his numerous friends.

Interesting to Obstetricians.—On the 21st of February there was born (foaled, dropped, or whatever may be the proper word) at the Zoological Gardens in the Regent's Park, London, an infant hippopotamus. A writer in the *British Medical Journal* of February 25, perhaps better informed than we as to the manners and customs of hippopotami, thought there might be another interesting little stranger awaiting delivery. (Later advices announce the death of the calf, (?) which was the only one.)

Hospital Appointments Abroad and at Home.—Dr. Duchek has been appointed the successor of the celebrated Skoda in the University of Vienna, and Dr. Richard Liebreich has been elected Ophthalmic Surgeon to St. Thomas' Hospital.

Dr. M. Gonzalez Echeverria has been appointed Superintendent to the new lunatic asylum in New York.

Mormon Precaution.—According to the *Northwestern Medical and Surgical Journal*, "Mormon physicians are forbidden, under a penalty of $1000 and not less than a year's imprisonment, to prescribe any of the more powerful agents known to the medical profession, without first explaining to the patient and his friends their medical properties, and procuring the unqualified consent of all concerned."

The German Army Diet-Table.—According to the *London Lancet*, the Germans seem to be a hardier race than the French. They can eat black bread, the issue of which to the French prisoners was stopped because they could not digest it. They were placed during forced marches on a mixture of peas and meat, which proved an economical and easily-carried ration; more easily carried, we should judge, in the knapsack than in the stomach. For stimuli they had Rhine wine whenever procurable. Additional testimony was afforded to the value of tobacco to men subjected to the hardships of a campaign.

Aid to the Sick and Wounded.—From the same source we get an interesting item as to the proceedings of one of the societies analogous to our own Sanitary Commission:

"The sixth report of the Berlin Society for the Aid of the Sick and Wounded in War has lately been issued. During the half-year ending January 22, 251 consignments of articles had been made to depots, 516 to lazareths, and 52 to armies in the field. The Central Committee had expended about 2,030,000 thalers in the purchase of necessary articles; and much assistance had also been received in the form of numerous gifts of useful materials of various kinds. Among the articles sent out by the committee were the following: 74,000 blankets, 51,000 ells of India-rubber cloth and water-proof sheets, 557,000 woollen stockings, 233,000 pairs of drawers and 137,000 of socks, 196,000 shirts and 345,000 body-bandages, 1,065,000 bandages of all kinds, 69,000 pounds of charpie, 283,000 compresses; together with a large number of surgical instruments and apparatus, including 90,000 packets of Dover's power and of quinine and morphia, 50,000 bottles of laudanum and 10,000 of hydrate of chloral, and more than 3000 pounds of chloroform. The articles sent included also 244,000 hams and pieces of smoked meat, 43,000 pounds of sausages and 13,000 of extract of meat, together with 1,000,000 bottles of wine, cognac, arrack, liqueurs, brandy, etc."

Statistics of Suicide.—According to the *British Medical Journal*, "in analyzing the statistics of inquests held, as Coroner of Central Middlesex, Dr. Lankester points out, in his seventh annual report just prepared, that the proportion of suicides to the population in England and Wales is 1 in 12,000, while the proportion in Central Middlesex is about 1 in 13,000. The figures seem to show that of all causes of death suicide is the most constant. The proportion in which the sexes commit suicide is nearly everywhere the same. It may be stated that the proportion of males to females is as five to two. The ages at which suicide is committed are for the

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seven years nearly the same. One in twelve are young people under 20 years of age; a larger proportion among people above 60; and the remainder, nine-tenths of the whole, are equally divided among people from 20 to 40 years of age. A further analysis of the cases shows that, as a rule, women prefer taking poison and drowning themselves. Of the twenty-three cases of female suicide in 1868–9, six were from poisoning and ten from drowning. Women seldom cut their throats or hang themselves, whilst, of the sixty-six cases of male suicide, exactly one-half chose these methods of self-destruction. Men are also more given to jumping out of windows and from the tops of high places."

A CHINESE THEORY OF SUDDEN DEATH.—A telegraph-line about fifteen miles long having been constructed near Shanghai, the natives supposed that the messages were carried along the wires by devils in the employ of the foreign barbarians. To this they made no objection, until a Chinaman chanced to die suddenly in a house near which stood one of the telegraph-poles. It then occurred to another native genius (an amateur coroner) that one of the devils had come down from the wire and killed the unfortunate man; whereupon he and his compatriots proceeded to destroy the dangerous apparatus.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—The next meeting of the Medical Society of the State of Pennsylvania will be held at Williamsport, June 13, 1871.

The following-named gentlemen are delegates from the Philadelphia County Medical Society:

Drs. D. H. Agnew, W. L. Atlee, L. S. Bolles, L. Curtis, L. K. Baldwin, A. Frické, Wm. Goodell, H. D. Benner, A. H. Fish, J. H. Grove, A. G. B. Hinkle, A. D. Hall, G. Hamilton, W. H. Hooper, W. H. Finn, W. H. Bunn, Jos. A. Landis, H. Leaman, H. D. McLean, A. Nebinger, M. O'Hara, W. H. Pancoast, W. C. Phelps, W. M. L. Rickards, W. M. Welch, John T. Williams, J. T. Walton, C. R. Prall, R. H. Wevill, J. C. Whiteside, J. R. Wells, and T. J. Yarrow.

The *ex-officio* delegates from Philadelphia are Drs. S. D. Gross, Laurence Turnbull, Wm. B. Atkinson, Wm. Mayburry, and H. St. Clair Ash.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.—The following-named gentlemen have been duly chosen by the College of Physicians of Philadelphia to represent it at San Francisco in May: Drs. George B. Wood, Alfred Stillé, S. D. Gross, W. S. W. Ruschenberger, F. G. Smith, S. W. Mitchell, J. M. Da Costa, John H. Brinton, Wm. Goodell, W. S. Halsey, J. M. Adler, R. M. Townsend, R. H. Townsend, W. W. Keen, O. A. Judson, Isaac Ray, Horace B. Hare, and W. F. Norris.

METEOROLOGICAL.—The mean temperature of the month of March just past, according to the record kept at the Pennsylvania Hospital, was 48.7°, being higher than that of any corresponding month for eighty-two years.

The average temperature of this month, in this latitude, is stated at 39.2°. The lowest recorded mean was in 1843,—30°; the next, in 1856,—32.85°.

The mercury did not descend in March of this year below 34°; in every other year of which we have any data it fell below 32°. We cannot but think that these facts must have had a traceable influence upon the health of the city.

MORTALITY OF PHILADELPHIA.—The following statements are condensed from the returns made to the Health Office:

Interments for the week ending March 25, 1871 315

Adults, 174
Minors, 141

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 49)	85
Diseases of Brain and Nervous System	55
Debility, 16; Marasmus, 6; Old Age, 13; Inanition, 2	37
Zymotic Diseases	28
Diseases of Abdominal Organs	28
Diseases of Organs of Circulation	18
Stillborn	19
Casualties, 6; Suicide, 1; Gunshot, 1	8
Cancer and allied diseases, 10; Scrofula, 3	13
Unclassifiable, 22; Unknown, 2	24
	315

Interments for the week ending April 1, 1871 261

Adults, 140
Minors, 121

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 50)	85
Diseases of Brain and Nervous System	46
Debility, 10; Marasmus, 7; Old Age, 9; Inanition, 2	28
Zymotic Diseases	13
Diseases of Abdominal Organs	31
Diseases of Organs of Circulation	14
Stillborn	19
Casualties, 7; Suicide, 2; Murder, 1	10
Cancer, 2; Scrofula, 1	3
Unclassifiable, 7; Unknown, 5	12
	261

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 19, 1871, TO APRIL 4, 1871, INCLUSIVE.

By S. O. 109, War Department, A. G. O., March 18, 1871, the following officers are relieved from duty in the Department they are serving, and ordered to report in person for assignment to duty to the General commanding the Department to which they are transferred:

GHISELIN, JAS. T., SURGEON.—From the Department of the Columbia to the Department of the East.

BYRNE, C. C., SURGEON.—From the Department of the Missouri to the Department of the East.

TOWN, F. L., SURGEON.—From the Department of Dakota to the Department of the East.

HARTSUFF, A., ASSISTANT-SURGEON.—From the Department of the Columbia to the Department of the Lakes.

JANEWAY, J. H., ASSISTANT-SURGEON.—From the Department of the East to the Department of the Missouri.

HAPPERSETT, J. C. G., ASSISTANT-SURGEON.—From the Department of the East to the Department of the Missouri.

BROOKE, JOHN, ASSISTANT-SURGEON.—From the Department of the East to the Department of the Columbia.

MILLER, G. McC., ASSISTANT-SURGEON.—From the Department of the Missouri to the Department of the South.

LIPPINCOTT, H., ASSISTANT-SURGEON.—From the Department of the Missouri to the Department of the East.

The officers serving in the Department of the East named in this order will be relieved from duty when those assigned to that Department shall have reported for duty.

WINNE, C. K., ASSISTANT-SURGEON.—By S. O. 23, Headquarters Military Division of the Missouri, March 25, 1871, granted leave of absence for *sixty days*, with permission to apply for an extension of *sixty days* to the Adjutant-General of the Army.

TILTON, H. R., ASSISTANT-SURGEON.—By S. O. 56, Headquarters Department of the East, March 20, 1871, assigned to duty as Post-Surgeon at David's Island, N. Y. H.

MCMILLIN, THOS., ASSISTANT-SURGEON.—By S. O. 52, Headquarters Department of California, March 18, 1871, assigned to duty at Angel Island, San Francisco Harbor, Cal.

HOFF, ALEX. H., ASSISTANT-SURGEON.—By S. O. 52, C. S., Department of California, assigned to duty at Alcatraz Island, Cal.

HEIZMANN, C. L., ASSISTANT-SURGEON.—By S. O. 48, Headquarters Department of the Platte, March 22, 1871, to accompany detachment of Fourth Infantry from Omaha, Nebraska, to Louisville, Kentucky, and upon completion of this duty return to these Headquarters; and by S. O. 49, C. S., Department of the Platte, granted leave of absence for *twenty days*.

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MONDAY, MAY 1, 1871.

ORIGINAL LECTURES.

TWO CLINICAL LECTURES

ON CASES OF UNUSUAL VASCULAR MURMURS WITHIN THE CHEST.

BY ALFRED STILLÉ, M.D.,

Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital, etc.

LECTURE II.

GENTLEMEN:—The second case which we propose to study, although not so unusual as the first, nevertheless relates to a physical sign which is generally overlooked, and when noticed is apt to be misunderstood.

Ulrich F., admitted December 16, 1870, is a white male, 47 years old. Was born in Switzerland, and came to America when 30 years old. Is of short stature,—about 5 ft. 6 in.,—swarthy complexion, bilioso-sanguine temperament. Was married for eight years, but is now a widower. Had two children; both died in infancy. Father died of phthisis at 50; his mother—of what cause he does not know—at 63. One brother lives in France, in good health. His occupation was that of a laborer and farm-hand; ploughed and did heavy work. During the late civil war he served for nine months in the cavalry. Never had syphilis, nor any pulmonary complaint. The last half of his term of military service he says that he had "rheumatism" of the thighs and legs, "which were all black and blue." After leaving the army, his health was good until April, 1870, when he took relapsing fever, and was treated in this hospital, where he remained for two months.

He entered again December 16, on account of weakness and shortness of breath, when he was found to have acute bronchitis, and, apparently, a slight enlargement of the heart. For two weeks after admission he daily expectorated about half an ounce of pure blood. From all these symptoms he was gradually relieved, appeared in very good condition, and rather gained than lost flesh.

January 6.—A physical examination of the chest was made, of which the following note was taken: "A blowing murmur is distinctly heard half an inch below the centre of the left clavicle, upon the central portion of the bone, and under its external third. Its maximum loudness is under the middle of the outer third of the clavicle. It is loud, high-pitched, slightly rough, and synchronous with the arterial pulse." On the 11th, a more careful examination gave the following results: "Aortic, pulmonic, cardiac, carotid, and jugular sounds are all natural. The murmur under the outer third of the left clavicle is greatly intensified by a full inspiration, but is weakened by complete expiration. The respiratory murmur is scarcely audible above the second intercostal space, except quite near to the sternum. Even forced inspiration fails to develop a distinct respiratory murmur at the point where the vascular murmur is loudest. Within the same limits percussion-resonance is decidedly diminished. At a corresponding point of the right side percussion and respiration are normally loud and clear, and there is no arterial murmur.

"The development of the base of the neck is symmetrical. The left carotid pulsates a little more plainly than the right, but the right subclavian more visibly than the left. Pressure upon the left subclavian behind the clavicle develops a thrill. Præcordial dulness is slightly increased, but the impulse is normal. Auscultation behind shows that the respiratory murmur is feebler towards the outer limit of the left apex than at the corresponding point of the right side, but is otherwise normal. On causing the patient to place the left hand on the top of his head, the subclavian murmur grows much louder; but when the arm is slowly brought down to the side, the murmur gradually diminishes. Pressure upon the upper part of the brachial artery does not diminish it. The radial artery at the left wrist is smaller and more tense than the corresponding vessel of the right side."

This case may be summarily presented as follows: A man of middle age, strong frame, and laborious habits, lost his father by phthisis. His own health was always good until, in April last, he had an attack of relapsing fever, from which he entirely recovered. In December, however, he caught cold, had a mild bronchitis, and suffered frequent attacks of hæmoptysis, which were at the time, and in the absence of any other discoverable cause, attributed to a slight hypertrophy of the heart, coupled with bronchial congestion. The bleeding ceased, the cough nearly disappeared, and the strength returned, but some dyspnœa on exertion continued. While we were searching for the cause of this symptom, consolidation of the outer part of the upper lobe of the left lung was detected, and where the subclavian artery crosses the first rib a murmur synchronous with the arterial diastole was audible. It was high-pitched, slightly rough, rendered more intense by full inspiration and by raising the hand to the head, but became weaker during inspiration and when the hand hung by the side.

We observe, then, in this case a probable hereditary tendency to phthisis, the occurrence of a febrile disease, which not unfrequently provokes the development of consumption, followed after several months by a bronchitis, during which repeated hemorrhages from the lungs took place, and afterwards the physical signs of solidification of the apex of the left lung. This history and these local phenomena render probable the existence of pulmonary phthisis in its first stage. Now, along with these symptoms and local signs there is another, and a comparatively unusual one,—viz., a murmur in the subclavian artery. It is a peculiar murmur; for at times it is absent altogether, then again is very loud, and also varies in its intensity according to the position of the patient's arm. It is not a blood-murmur; for no similar sound can be detected in the heart, in the carotids, or in the right subclavian artery, nor yet in the veins. It is strictly limited to the spot where the left subclavian artery crosses the first rib, becoming less intense as the stethoscope is removed in any direction from that point.

The greater number of these phenomena suggest very strongly the existence of an aneurism of the left subclavian artery, and such indeed was the first impression made upon my own mind; but when I discovered that the murmur ceased at times, and again increased or diminished according to the position of the left arm, the supposition of an aneurism was no longer tenable. It appeared that the murmur was loudest when the arm was elevated to a vertical position, and that it gradually declined, and at last became very faint, as the limb was brought down to the side; and, further, it was *increased by full inspiration, and diminished by complete expiration*. Consequently, it seemed probable that some pressure upon the artery occasioned the murmur. Considering the solid condition of the upper and outer portion of the lung, it was easy to comprehend how a full inspiratory act, by pressing the solidified lung upwards against the artery, might interfere with the circulation through it, and occasion a murmur. And to this opinion I am disposed to adhere.

But there was another condition under which the murmur was produced: it occurred when the left arm was elevated. Now, this position of the arm, it appears, should have a directly opposite effect, so far as the lung is concerned, from that of a full inspiratory act; for, instead of pressing the solidified lung against the artery,

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it would rather tend to separate the two from one another by elevating the first rib, and should therefore diminish the murmur so far as that depended upon the cause at first assigned,—*i.e.*, pressure of the lung. But while the elevation of the arm and of the first rib tended to relieve the artery from pressure from below, it evidently had the effect of bringing the first rib into closer proximity with the clavicle, and, therefore, of subjecting the artery to compression between those two bones.

It seems probable, therefore, that in the case we are studying two murmurs are heard at the same point upon the surface of the chest, one of which is attributable to pressure by the condensed lung upon the subclavian artery before it emerges *from* the chest, and the other to the pressure on the vessel of the clavicle and first rib, after the artery has passed out of the thoracic cavity.

In further illustration of this subject, I shall offer you a sketch of the history of subclavian murmurs as they have been observed by others.

Dr. Kirkes and Dr. Sibson appear to have been the first to draw attention to the subject; but the earliest paper relating to it which I have seen was published by Dr. Thorburn, in 1859.* He observed it in seven or eight cases which were alike in no particular, with regard to the existence of tubercle, of cardiac or of aortic disease, and in one case at least he found the murmur upon the right as well as on the left side. After him followed Dr. B. W. Richardson, to whom medical science is so deeply indebted for many original observations and ingenious inventions. In his *Clinical Essays*, published in 1862, this eminent physician thoroughly investigated the curious and novel phenomenon. He found that it rarely occurred in females, and that the youngest person in whom he met with it was eighteen years old. It was observed most frequently in chronic bronchial affections, next in phthisis, then in anæmia, and finally in diseases of the heart, but also in numerous instances of persons who were in excellent health. The greater number of cases occurred in men who used their arms vigorously, and especially in cabinet-makers, carpenters, and sawyers. In one class of cases it was frequently found by him, as it had been by Kirkes and Sibson, and as we observe it in the patient whose case suggested these remarks,—viz., where there was an upward pressure on the subclavian artery by a lung consolidated by tubercle or by broncho-pneumonic inflammation; and in them, as in our own case, the murmur was intensified by full inspiration. Indeed, Dr. R. justly regarded this symptom as a sign of phthisis of the apex in its early stage, and, therefore, as possessing a certain practical importance. The other class of cases—the largest class, as has been stated—consisted of persons who were free from pulmonary disease, but who followed trades which require a vigorous exertion of the muscles that move the upper extremities, and in whom, therefore, Dr. Richardson inferred, the subclavian muscles attained an unusual development. In this judgment subsequent observation confirmed him, for in 1868 he declared,† "I believe there is not a working carpenter, joiner, or cabinet-maker living in whom the murmur may not be detected. The fact extends also to men of other pursuits. Among the wealthier classes—among those who ride daily on horseback and in those who drive—it is almost certainly present. The nature of the pressure in these cases is, I think, very simple. The pressure is exerted on the artery by the subclavius muscle; for when the murmur is best marked it can always be destroyed by so changing the position of the arm as to relax the subclavius." It was objected to this exclusive view by Dr. Thomas Palmer‡ that the diminution of the calibre of the artery from below, by the elevation of the first rib, is a much more natural and probable cause of the murmur; and he points out that in all cases the murmur is intensified by full inspiration, which, of course, elevates the first rib, and tends to compress the artery against the clavicle. It is further to be observed that the existence of a groove in the first rib for holding the artery proves its liability to pressure by the clavicle; and the curved course of the vessel of the left side, as compared with the straight direction of the right subclavian, also suggests the greater probability of its generating a murmur under a comparatively slight pressure.

From this short summary of the phenomena and rationale of subclavian murmurs it is evident that too much importance should not be attached to them as indications of consolidation of the apex of the lung, and, in so far, as signs of phthisis. More particularly is this true of cases in which the sound is developed by raising the arm, while it is absent when the arm hangs at the side. The only cases in which its presence need be taken into the calculation of probabilities respecting this disease are those in which the murmur is developed by a full inspiration rather than by a change in the position of the arm.

A murmur in the subclavian may, especially if it be loud, suggest the existence of an aneurism in that artery. A comparison of the phenomena in the two cases will place them in strong contrast. Dr. Richardson has fully stated the elements of this diagnosis, of which the following is a summary: In aneurism the murmur is fixed in one spot, is unchanged by respiration, by pressure with the stethoscope, and by movements of the arm. Its percussion dulness is independent of consolidation of the lung; its fremitus, if any, is permanent; it is usually attended with dyspnœa, and is always confined to one side. Subclavian murmur, on the other hand, changes place and quality, and even disappears by change of posture; is modified by respiration, by pressure, and position of the arm; is often heard under both clavicles, and is not necessarily or constantly accompanied either by fremitus or by dyspnœa. Percussion dulness, if any, is attended with other signs of lung-disease.

Before quitting the discussion of subclavian murmurs, I may briefly allude to another sound, which sometimes has a similar interest and significance. Many years ago Dr. Latham§ called attention to a gentle bellows-murmur which he had observed "either in those who were undeniably consumptive, or in those who were suspected of being so," and which was heard near the junction of the second left rib with the sternum,—that is to say, over the trunk of the pulmonary artery. In 1859, Dr. Da Costa‖ published and analyzed a number of cases in which this murmur was proved to be due to various causes of compression of the pulmonary artery, and chief among them tuberculous consumption. Thus it appears that in addition to the more usual physical signs of that disease we should not neglect those which are the effect of pressure by the consolidated lung, either upon the subclavian or on the pulmonary artery.

With these general remarks I will offer you an opportunity of hearing the subclavian murmur in several patients, some of whom are tuberculous, while others have no disease whatever of the lung.

* *British Medical Journal*, June 18, 1859. A recent notice of it by the same author is contained in a paper "On Vaso-Respiratory Physical Signs," *Manchester Medical and Surgical Reports*, i. 94.

† *Medical Times and Gazette*, October, 1868, p. 443.

‡ *Lancet*, April, 1864, p. 379; ibid., September, 1868, p. 306.

§ Lectures, etc. on Diseases of the Heart, Phila., 1847, p. 45.

‖ *Amer. Jour. Med. Sci.*, January, 1859, p. 119.

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ON THE PATHOLOGY, DIAGNOSIS, AND PROGNOSIS OF THE DIFFERENT FORMS OF BRIGHT'S DISEASE OF THE KIDNEY.

ILLUSTRATED BY SELECTED CASES.

BY JAMES TYSON, M.D.,

Clinical Lecturer on Microscopy and Urinary Chemistry in the University of Pennsylvania.

IT would scarcely seem necessary, at the present day, to indicate the class of diseases usually included under the term Bright's Disease of the Kidney. Yet, as authors differ as to what should be thus included, it is not unreasonable to suppose that practitioners less fortunate in opportunity of observation and research should occasionally be uncertain as to the scope of the term. Thus, of modern observers, Virchow bases his divisions of Bright's disease upon the special tissue involved. The term parenchymatous nephritis is used when the tubules are the particular seat, amyloid degeneration when the blood-vessels are involved, and cirrhosis when the disease affects the interstitial substance or so-called stroma of the kidney. With him, also, fatty degeneration of the epithelium of the tubules, always a chronic state, may be either primary, or secondary, *i.e.*, "a later stage, a termination" of the parenchymatous nephritis.* He also says "the kidney, whose epithelium has passed into a state of fatty degeneration, nearly always shrivels up, and the result is a permanent atrophy;"† which, if succeeding the *secondary* fatty degeneration, would be a *third* stage of parenchymatous nephritis.

Similarly founded is the classification of Dr. Dickinson, of London, who to the first of the forms referred to, gives the name tubal nephritis, to the second depurative, waxy, or amyloid disease, and to the third granular degeneration, which, according to this author, is never the termination of the acute tubal nephritis.

Dr. Aitken, somewhat similarly, makes parenchymatous inflammation, affecting the tubules, and interstitial inflammation where the stroma is involved, but describes also the large white kidney, the small contracted kidney, fatty and amyloid degenerations, and certain mixed forms.

Dr. Roberts, of Manchester, divides Bright's disease into the acute and chronic forms, further subdividing the latter into the smooth white kidney, the granular red kidney, and the lardaceous or waxy kidney.

Dr. T. Grainger Stewart, whose descriptions of the pathological appearances of the different forms are an excellent guide, classifies Bright's disease as follows:

1. The inflammatory form, of which there are three stages—

a. That of inflammation; *b*. Fatty transformation; *c*. Atrophy.

2. The waxy or amyloid form, of which there are also three stages—

a. Degeneration of vessels; *b*. Secondary changes in the tubes; *c*. Atrophy.

3. The cirrhotic, contracting, or gouty form.

Dr. Beale describes five conditions: 1. The enlarged and acutely-congested kidney of acute Bright's disease; 2. The large, white, fatty kidney; 3. The chronically-contracted and wasting kidney; 4. The *fatty contracting* kidney; 5. The albuminoid or waxy kidney. The last four are chronic states.

Dr. Basham adopts a similar classification, omitting, however, the *fatty contracting* kidney, and adding the *gouty* contracted kidney, which he considers of sufficient importance to be separated from the granular contracted kidney, though the chief difference seems to consist in the presence of streaks of urate of soda within and without the tubules, and in its occurrence in a gouty subject. Dr. Basham also considers this deposit as the cause of the condition of the kidney, and not merely a concomitant. He includes these latter conditions under the term chronic *nephritis*, an unfortunate error, since in his own descriptions he admits them to be not all inflammatory in their origin.

Singularly, Dr. Harley restricts the name Bright's disease to acute nephritis, whether traumatic, idiopathic, or scarlatinal, which, he says, besides being the condition most frequently met with, was that with which Bright was most familiar.

Dr. Da Costa (Medical Diagnosis) treats of acute and chronic Bright's disease, but separates from acute Bright's disease the form of acute nephritis, characterized by usually affecting one kidney, much greater pain and tenderness in the lumbar region, retraction of the testicle, higher degree of febrile action, and bloody urine, but little albumen. Under acute Bright's disease, he includes scarlatinal nephritis and the similar condition resulting from exposure to cold and generally affecting both kidneys. Under chronic Bright's disease, the same author places the large fatty kidney "pre-eminently Bright's disease," the enlarged chronically-inflamed kidney (large white kidney of the English), the waxy kidney, and, finally, the small contracted kidney.

In consequence of this variety of classification, it is evidently important that each writer should primarily present his own, that he may be clearly understood, though it is also much to be regretted that uniformity cannot be secured.

We would, accordingly, continue the term Bright's disease, which, indeed, we hope will always be retained as a generic term, and make of the conditions it includes two divisions,—the acute and chronic.

In the former we would place all forms of acute inflammation attended by albuminuria, including the acute nephritis of Da Costa. Under chronic Bright's disease we would include the fatty kidney, the granular chronically-contracted kidney, the lardaceous, albuminoid, or waxy kidney, and certain mixed forms. This is the classification of the Royal College of Physicians of London, also about to be adopted by the American Medical Association; and it is entirely consistent with the pathology of the disease. It should be stated that Dr. Tanner, in his text-book on "The Practice of Medicine," also adopts the classification of the Royal College of Physicians. The addition of the *mixed* forms involves no inconsistency with the nomenclature adopted by these authoritative bodies, and is, on the other hand, we believe, necessitated by a study of the pathology.

I. ACUTE BRIGHT'S DISEASE.

SYNONYMS, *acute albuminuria, acute desquamative nephritis, acute renal dropsy, acute nephritis, acute tubal nephritis, parenchymatous nephritis.*

Pathology.—The appearance of the kidney here differs somewhat with the stage, but that usually noted in the event of death in the true acute stage is that of the acutely-congested organ. There is, in the first place, more blood, and more of the cellular element in the tubules, as well as additional free granular matter in and between the tubules. There must, therefore, be increased size and increased weight. The kidney may properly be spoken of as swollen. Again, when the capsule is stripped off, as it is with facility, the exterior of the kidney is seen to be mottled, from the presence of red vascular points, while its general color is dark or purplish, though in different degrees. On section, the convoluted secreting structure, both cortical and interpyramidal, is seen to be increased in extent. The Malpighian bodies may be selected with the naked eye from surrounding tissue on account of their prominence and dark color, and the vessels are generally visible from their congestion. The latter are, however, also separated

* Cellular Pathology, Am. ed., Chance's Translation, 1863, p. 393.
† Ibid., p. 393 a. f.

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by a material of lighter color, which will prove to be the altered tubules. The cones of straight tubules are generally darker in color than the convoluted portion, but here, also, the darker congested vessels are separated by the lighter lines of the tubules.

Microscopically, the points thus described are simply rendered more distinct by a low power, but to a power of four hundred diameters, the changes are found to be chiefly in the tubules and their dilated terminations the Bowman's capsules, and in the cells lining these. The free cells, which will be noted floating at the edge of the section, will be found enlarged, and granular in varying degrees, some being perfect compound granule-cells, while others contain but a few granules. The nucleus of the cell is obscured in varying degree, and in proportion to the amount of granular matter present in the cells. Many blood-corpuscles and much free granular matter will also be found thus floating. At a stage which would, however, probably represent a transition between the acutely-congested kidney and the chronic, into which it often merges, the cells will contain a few oil-globules, while free oil may also be noted, But when these elements are copiously present we have the fatty stage, which is chronic.

But to return to the tubules. These are wider than in health, because of the enlarged granular cells, the blood-corpuscles which passed by rupture or otherwise into them, and free granular matter. From the varying quantity of these elements, the tubules are also in varying degrees opaque, and the limitary boundary of the cells more or less completely obscured; the cells are pushed into one another, as it were, and become continuous. When the cells are very numerous and granular, and the free granular matter abundant, choking up the tubules, the latter are quite dark and opaque, appearing simply granular, and no cells can be made out. The Malpighian bodies exhibit a similar appearance, though perhaps relatively darker, from the presence of the blood, while their walls, as well as those of the tubes, are often thickened, though scarcely more opaque, as is alleged by some. Again, more particularly in the straight tubes of the pyramids, some tubules are unaffected, and contain the lining cells in normal appearance.

Clinical History and Diagnosis.—These, in brief, are the pathological appearances. Let us consider, now, the symptoms and diagnosis. After exposure to cold and moisture, particularly during copious perspiration in an adult, or after scarlatina in a child, the patient is seized with a *chill*, followed by *fever*, more usually moderate, coincidently with which is noted lumbar pain, with frequent disposition to micturition, which is only partially successful. The little urine passed is usually smoky in hue, since the reaction is commonly acid; but should the urine be alkaline, it will be bright red. Both conditions are due to the presence of blood which has passed from the capillaries to the tubules by rupture, but possibly, also, by a "wandering" through the membranous partition. Very soon, also, or sometimes even before the other symptoms present themselves, dropsy appears; is perhaps, though not necessarily, first noticed about the eyes, but rapidly spreads to the face and lower extremities, and there may even be œdema of the arms, hands, and body. Enormous œdema of the prepuce and scrotum often embarrass the case, the former obstructing the flow of urine, and the latter causing sloughing. Abdominal dropsy may also be present. All these symptoms may, however, be induced by other causes, though they are of themselves not without significance.

Microscopic and chemical examination of the urine, however, gives us the crucial test, and by this aid the diagnosis is rendered easy, even without the symptoms named. As stated, the urine is usually acid, and presents a dark or smoky hue. Its specific gravity is high, from the presence of blood, generally above 1020, often approaching 1030, and a copious precipitate of albumen takes place on the addition of nitric acid or the application of heat; the urine is indeed sometimes rendered almost solid by the tests. The *casts* are, however, most distinctive. These are of the epithelial and granular kind, and blood-casts. The fibrinous material of which the mould is formed has entangled whatever happened to be there at the time, and it has been stated that epithelium, blood, and granular matter are present in the tubes in this condition. Hence this sort of cast. Again, numerous blood-corpuscles and free epithelial cells are found floating in the field. The latter exist singly and in aggregations, and often they are seen forming a solid cylindrical mould of the tubule, without, apparently, presenting any limitary membrane of the fibrinous substance to which the mould is usually primarily due. The epithelial and granular casts may, however, be found in other conditions of the kidney, but *blood-casts* seldom. Uric acid deposits also commonly attend, and are detected by the microscope, but they are not constantly present. Oxalates may also be found, but there is nothing distinctive in their presence.

It must be recollected that all these phenomena and signs may appear in a chronic case in which an acute attack has supervened. They are, nevertheless, phenomena of acute nephritis; but if the practitioner is not familiar with the previous condition of the case, he may err, and give his prognosis accordingly.

For the *prognosis* of acute Bright's disease, whether scarlatinal or from exposure, is favorable, and recoveries are frequent. Much may be accomplished by a judicious treatment; but we must always be guarded, for many insidious causes may produce sudden death. Thus, uræmia may supervene, and at a time when we have reason to believe our patient is convalescent.

For example, a child of about five years had an imperfectly-developed attack of scarlatina, which was considered simple sore throat, and he was allowed to go out of the house in winter weather. Dropsy supervened, and the mother carried him to a homœopath, who failed to appreciate the condition or its cause. He prescribed, however, directing the child to return. He did so several times, growing constantly more œdematous. The writer was finally asked to visit him, when he found enormous œdema throughout the body. A little examination satisfied him as to its cause. The smoky urine was highly albuminous, almost solidified on use of heat and NO_5, and contained blood and epithelial casts, with numerous blood-corpuscles. He was placed on appropriate treatment, when the dropsy and albumen diminished. He was a wilful boy, and his indulgent parents again allowed him to be exposed to cold. The dropsy increased, and the albumen as well. So great was the œdema of the prepuce that his urine had to be drawn, and so difficult the introduction of the catheter that it was finally allowed constantly to remain. The scrotum was also enormously swollen, and sloughing ensued. Under appropriate treatment, however, all these symptoms subsided; the catheter was no longer required, the albumen rapidly diminished, and the quantity of urine was sufficiently abundant. I saw him at 2 P.M. of a Saturday, and believed him to be convalescent, while his mother said that until that day she had not believed his recovery possible, but now realized his improvement. Between five and six of the same evening, after slight vomiting, he became suddenly unconscious. I did not reach him for several hours; but all efforts were unavailing, and he died at one o'clock following. Very careful examination of the mother elicited that he seemed a *little drowsy* on the previous day, but was particularly bright on the afternoon in which coma supervened.

Now, here is a case, thought to be convalescent, suddenly dying. Could anything have altered the view taken? Possibly a quantitative analysis of urea, at intervals of two or three days. But in how few instances

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is this possible! Of American practitioners, few are qualified to make such analyses, and fewer have time amid the varied and numerous engagements of active practice. Yet until it has been shown that urea is not the poisonous element inducing the coma, its quantitative determination should not be overlooked. It is true that by means of such tables as that of Prof. Houghton,* approximate estimates can be made; and they should not be neglected. Caution in prognosis with regard to individual cases of acute Bright's disease, however, is the moral we desire to point, notwithstanding the fact that the majority recover. So-called uræmia is, then, the condition we are most to fear.

Pulmonary œdema may also occur, and the patient is drowned in the excess of his own secretions. Its onset is characterized by shortness of breath, frothy expectoration, and abundant smallish moist râles.

The following brief history also teaches caution to the young pathologist:

A lady in good position was under the care of an eminent and skilful practitioner of this city for diabetes. The urine contained quantities of sugar, but no albumen was present at any time. She finally died, and one of the kidneys was sent to the writer for microscopic examination, the gentleman who made the post-mortem examination having been struck with the apparently increased area of the convoluted portion. I examined it carefully, and found it corresponded in condition, with scarcely an exception, to that already given of the acutely-congested kidney. Here, apparently, were produced, through excessive action alone, all the physical conditions of an inflammatory affection.

In conclusion, acute Bright's disease is easy of diagnosis. The prognosis, with prompt treatment, is generally favorable; but accidents may occur when we least expect them, and teach caution with regard to individual cases. It is reasonable also to suppose that frequent *quantitative* examination for urea, as well as repeated microscopic examination, will give us information which will at once aid us in forming an opinion, and in modifying a treatment which may have become less active on account of apparent improvement.

II. Chronic Bright's Disease.

Of the chronic form, three varieties clearly exist,—the fatty, granular, and albuminoid conditions.

A.—The *fatty kidney*, we believe, may originate in two ways:—1st, by a transition of the acute into what is called chronic inflammation, though the inflammation has generally subsided; or, 2d, it may originate primarily as the result of a defective nutrition,—that is, it may be a simple fatty degeneration. This latter is distinguished also from those conditions of fatty change without albuminuria which are found in phthisis, and in intemperance,—in fact, from all cases where there is never albuminous urine.

Pathology.—The fatty kidney is pale or almost white in hue, larger—often much larger—than normal, and often exudes oil in ordinary manipulations, or greases the knife with which it is cut or the paper in which it is wrapped. The capsule is unchanged, and strips off with facility. Its surface is usually smooth, and, notwithstanding its pale appearance, it is often marked with stellate vessels, while the mottled appearance is further contributed to by the presence of opaque yellow points, which are the fatty deposits, and which alternate with the more translucent normal structure. On section, the same pale and dotted appearance is seen in the convoluted structure, while to it is often added a linear arrangement of the opaque portions. The cones of straight tubes are little changed, contrasting as pink with the surrounding convoluted portion. Under a power of four hundred diameters, the contents of the convoluted tubules, and occasionally the straight tubules of the cones, are found to have undergone complete granular and globular fatty change. The epithelial cells are distended with granules and globules of oil, while free matter of the same kind fills the lumen and interstices, distending the entire calibre of the tube. Often no trace of cells is discernible, but the entire tubule is filled with black opaque granular matter. The Malpighian bodies are the seat of similar change, and, therefore, as well enlarged. It is noted that these oily matters occupy the position of the dots and streaks of opaque matter. At the edge of the section, numerous highly fatty cells, and abundant globules of free oil, are to be seen floating, as well as granular matter of the same composition.

Clinical History and Diagnosis.—Such is the pathological state of the organ. What are the data by which the condition is recognized during life?

If the acute inflammatory affection is prolonged beyond a certain period, somewhat variable, but which may be approximately stated at three months, without much change in the general condition, except, perhaps, a growing debility, the urine exhibits changes, more particularly in its microscopic characters. The bloody or smoky appearance has of course disappeared; the urine is perhaps paler in hue, but the specific gravity is still rather high,—usually from 1015 to 1030. It is still copiously albuminous. By microscopic examination, however, a change will be found to have taken place; instead of the blood-corpuscles, blood- and epithelial casts, these will be found to contain epithelium more or less completely filled with oil-globules, and these will be found also free in the casts from disintegration of the epithelial cells. Where the cast is not obscured by these elements, it will often be found hyaline or structureless, so as to be almost invisible; in fact, the cast is often first detected by a peculiar arrangement of the oil-globules and fatty epithelium, which evidently would not be assumed were they not held in this relation by the fibrinous substance forming the cast. Sometimes—often, indeed—in advanced fatty change the casts are so completely filled with the granules and globules of oil that they appear actually black, like masses of carbon. Floating freely in the urine are also seen numerous fatty cells, with compound granule-cells and free oil.

If the attack do not originate in this way, it is generally most insidious, and the date of its precise beginning is probably never determined. There may be such symptoms as indicate the presence of a hundred temporary disorders, as headache, nausea, indigestion, loss of appetite, and even pain,—much more reasonably attributed to such ailments than to chronic Bright's disease with fatty change.

Again, there may be an attack of bronchitis or erysipelas, typhoid fever, or other affection due to blood-poisoning, from which recovery is slow; or prolonged mental or physical exertion may be followed by unusual consequences. Loss of appetite prolonged, with headache, is, however, significant. If the condition be detected before dropsy appears, which always does present itself some time in the course of this form of chronic Bright's disease, it is because the physician, embarrassed to account for the condition, examines the urine and finds it albuminous; and with a knowledge of the microscopical appearances of the urine from a fatty kidney, the rest is easy. The disease has usually, however, probably been in existence several months before it is discovered.

Prognosis.—Having discovered such a condition to exist, what can we tell our patient? The mode of origin influences somewhat the prognosis, *at best unfavorable*. If the condition is one growing out of acute

*See Da Costa's Medical Diagnosis, Third Edition, p. 601.

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inflammatory disease, recovery may rarely take place, and much may be accomplished by appropriate treatment. But the patient generally dies within the year. This we have unfortunately had opportunity to verify in more than one instance. The result may be from exhaustion, uræmia with coma or convulsions, or both, or it may be from œdema of the lungs. Death from uræmia is, however, less common than in acute Bright's disease, or the form to be next considered. Yet to this usual fatal result it is said there may be exceptions. None have occurred in our own experience. As already stated, when the chronically-fatty kidney ensues after acute nephritis, life may be prolonged several years. Such is Case XI., narrated by Dr. Grainger Stewart on page 29 of his valuable work, illustrating what he describes as the second stage of acute inflammation, but which we would prefer to indicate as chronic Bright's disease with fatty change.

In summary, an opinion should not be too hastily formed, but if, after repeated examinations of urine, the amount of albumen continue large, and oil-casts, fatty epithelium, and free fat persist, and there is also persistent dropsy, the condition is one of fatty kidney, which will probably terminate in death in less than a year after coming under observation.

(To be continued.)

A CASE OF SCIRRHUS OF THE PYLORUS,

WITH REMARKS ON THE ELECTRIC EXCITATION OF THE STOMACH AND THE USE OF THE STOMACH-PUMP IN DILATATION OF THAT ORGAN.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania.

WILLIAM L., æt. 52, a brewer by occupation, came under observation in November, 1870. He had, until about a year previously, enjoyed excellent health; had been in the habit of drinking somewhat too freely of malt liquors, but had never experienced any dyspeptic trouble in consequence. In the latter part of 1869, however, he began to be troubled with epigastric uneasiness, with sense of weight after eating, with marked flatulence, and eructations of tasteless, inodorous gas. His bowels, which had previously been regular, also became constipated, requiring the use of powerful purgatives, and subsequently obliging him to aid their action by removing the contents of the rectum by the finger or a spoon. A few months later, vomiting began, and soon became of daily occurrence. The matters vomited consisted merely of food altered in proportion to the length of time which had elapsed since its ingestion. Usually vomiting occurred about three or four hours after eating, though occasionally it would not occur until late in the night. On one occasion only—in June, 1870—blood was vomited; it was in large quantity, of dark color, and granular, like coffee-grounds. Emaciation advanced steadily and rapidly. When first seen, the coloration of the surface was free from any cachectic tint. He had lost forty pounds weight within the previous year. The tongue was moist, slightly furred, and with a fissured surface. The appetite was quite good, though he feared to indulge it, on account of the consequent suffering. There was slight tenderness at the epigastrium, and great discomfort, but no actual pain. On examining him in the recumbent position, the epigastrium was found rather depressed, while a markedly prominent curved ridge, evidently the distended stomach, could be seen crossing the abdomen from the left to the right hypochondrium. The lower border of the stomach reached the level of the umbilicus. No distinct tumor could be detected, though there was a sense of induration at the pyloric end of the stomach. The vomiting and constipation continued as above described. There were no symptoms indicating disease of any other organ than the stomach. He was ordered a tonic mixture of quinia and nitromuriatic acid, powders of pepsin, and a diet of milk and beef-tea.

The effect of this treatment was a temporary gain in strength, with marked relief of the vomiting. Emaciation, however, continued, and the dilatation of the stomach increased.

On December 12, the following note was taken: When lying on the back (about two hours after eating a meal) it was easy to trace the shape of the stomach through the abdominal wall. There was a deep depression, extending from the xiphoid cartilage almost to the umbilicus, with a depth varying with the degree of contraction of the stomach. The stomach was greatly dilated, curving across the abdomen from the left to the right hypochondrium, with its lower border within an inch of the pubes. During the observation, the waves of peristaltic action could be seen sweeping along the stomach, imparting a vermicular movement to the viscus. At the beginning of each act of peristalsis, the contents of the stomach were grasped by the cardiac end of the stomach so as to form a hemispherical prominence in the left hypochondriac region. As the contraction extended, this prominence was carried along the curve of the stomach, the parts behind it becoming successively flattened. When the contents reached the pylorus, it was evident that they were forced against an obstruction there, so that a deep sulcus was produced parallel to and a hand's-breadth below the cartilage of the right ribs. After the effort to force the food through the pylorus was exhausted, a reflux towards the cardiac occurred. Each peristaltic contraction consisted of three separate waves: a short feeble one, then a very powerful one, which was the one causing the phenomena above described, and, finally, a third weak one. These periods of peristaltic action occurred at intervals of one minute, and lasted forty-five seconds. In a few instances the interval was much less, but the succeeding contraction seemed then to be feeble. Percussion over the most prominent part of the stomach during this contraction was tympanitic; as the contents were pushed on and the elevation subsided, the note became humoric, and finally dull. During the interval between the contractions, the whole abdomen became flattened, and it was no longer possible to trace the outlines of the stomach.

Efforts were made to determine the influence of irritation upon the peristalsis of the stomach. When the abdomen was relaxed, and the stomach quiescent, pressing and kneading it *seemed* to arouse contraction of its walls a little earlier than it would have occurred.

A magneto-electric current of considerable force was then applied by placing one pole on the surface of the abdomen over the cardiac extremity, and the other over the pylorus, or over some point of the greater curvature. Powerful contractions of the left rectus and portions of the oblique muscles on the left side occurred, forcing the contents of the stomach quickly to the pyloric end, and keeping them there as long as the current was maintained. This effect was, however, evidently due chiefly, if not solely, to compression of the cardiac extremity of the stomach by the contracting abdominal muscles; and when the motor point of the left rectus muscle was avoided, so that no contraction of the muscle was induced, the rhythm and force of the peristalsis were not appreciably affected. When a galvanic current (derived from sixteen elements, Stöhrer) was used, with the positive pole over the cardia and the negative pole over the pylorus, no effect was produced so long as the current was unbroken, excepting the development of erythema and papules near the positive pole. When the current was interrupted at rather short intervals, the same absence of effect upon the peristalsis of the stomach was observed.

At this time it was easy to detect a movable, non-sensitive, hard, ovoid nodule at the precise spot where the progress of the contents of the stomach could be seen to be arrested during the gastric peristalsis,—*i.e.* corresponding to the pyloric orifice.

He still derived some comfort from the use of pepsin, to which bismuth was added. The constipation was more relieved by a mixture of tr. rhei, ʒi, and tr. belladonna, gtt. xij, morning and evening, than by any other more powerful laxative. The temperature was taken in the left axilla, night and morning, for nearly a month, and found to vary from 97½° to 99°.

On February 20, 1871, he was suffering so greatly from gastric oppression and eructation that recourse was had to the

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stomach-pump. He was ordered to breakfast on milk and beef-tea at 6½ A.M.; the contents of the stomach were pumped out at 11 A.M., and the cavity washed out with a pint of warm water. A dinner of beef-tea and milk was then taken at 12½; the stomach-pump was again used at 7 P.M., and a half-pint of milk punch was given at 8.

The fluid obtained the first time amounted to over four pints, and was sour, fermenting, and very offensive. Subsequently the operation was repeated only every other day at 11 A.M., as the contents of the stomach were found to be no longer fermenting or offensive. He expressed himself very greatly relieved by this procedure: the epigastric oppression almost disappeared, and he no longer complained of sour eructations; his bowels became more regular, the stools being nearly normal. He did not, however, gain any strength, and on March 6 began to sink rapidly, expiring March 8. An autopsy was made, at which no lesion of any viscus excepting the stomach was found.

The *stomach* was greatly enlarged, and occupied an unnatural position, curving from the left hypochondrium down to midway between the umbilicus and the pubes, and thence to the right hypochondrium. Its walls were very greatly thickened, chiefly owing to hypertrophy of the muscular coat. The hypertrophied bands of muscular fibres constituting the longitudinal layer were very plainly visible through the peritoneum, especially along the greater curvature and near the pyloric extremity. The thickness of the walls in some places was not less than ¼ inch. The mucous membrane was rather pale and thickened throughout, and presented no trace of ulceration or of morbid growth: it was coated with much viscid mucus.

The pylorus was the seat of a dense scirrhous growth, obstructing the orifice to such a degree that a small sound only could be passed through it. The tumor formed by this growth was oval in shape, and did not exceed 1½ inch in length by 1 inch in its transverse diameter. On cutting through it, there was found a ring of dense fibroid or scirrhous tissue encircling the pylorus, and somewhat triangular in shape, with the base outward, so that the line of most extreme constriction was a very narrow one. The mucous membrane was thinned and partially destroyed for about one-half inch in extent, corresponding to the most constricted portion of the pylorus.

The line of gastric mucous membrane bounding this affected strip was marked by a row of firm, beady elevations, due to thickening of the membrane itself and infiltration of the submucous layer with fibroid tissue. There was no implication of the duodenum. The stomach contained, in addition to a considerable amount of grumous fluid, a large flattened cake of mixed black and white granular matter, which was moulded to the most dependent portion of the greater curvature of the stomach. This mass was solid and firm. Portions of it were diffused through water and subjected to the action of sulphuretted hydrogen, but without the production of any black deposit. This experiment was performed to determine whether any bismuth was present, since the patient had taken considerable quantities of that drug. When subjected to microscopic examination, the white portions were found to consist of innumerable minute polygonal granules of rice-starch, with a few granules of wheat-starch. The black granules were evidently portions of organic matter,—probably impurities which had been mixed with the rice.

Remarks.—Apart from the ordinary interest attaching to this case as a well-marked illustration of scirrhus of the pylorus, it has a peculiar value as illustrating (*a*) the peristalsis of the stomach, and (*b*) the physiological action of electric currents on this organ, and (*c*) as confirming to a certain extent the value of a new mode of treating dilatation of the stomach.

(*a*.) There are other cases on record in which the peristaltic contractions of a dilated and hypertrophied stomach have been visible through the abdominal walls. The only one of these which I can now recall is reported at page 550 of the Physiology of Todd and Bowman. I am not aware, however, that opportunity has been taken in any such case to accurately study the duration and frequency of the contractions. The characters of these contractions in a healthy stomach are thus described in Marshall's Physiology (American edition, p. 509): "The combined result of these (the contractions of the different fasciculi of the various layers) is a remarkable rotatory or churning motion, which urges the food from the great cul-de-sac along the lower border of the stomach towards the pylorus, and thence back along the upper border to the great cul-de-sac again, and so on; such rotation is said to occupy from one to three minutes (Beaumont)." In the case I have just detailed, the character of the peristaltic movements of the stomach appears to have been altered; for there seemed to be at the beginning of each wave a firm contraction of the cardiac extremity, so that the contents were compressed in the great cul-de-sac, and then the contraction gradually spread from the cardia towards the pylorus, while narrow portions of the stomach successively relaxed in front of the advancing mass of food. Once arrived at the pylorus, the contents were pressed against this opening until the peristaltic energy of the stomach was exhausted, when the entire organ relaxed, and the contents diffused themselves in its cavity. It was also clearly observed that each peristaltic period was made up of three successive waves of contraction, the first and last of which were feeble, while the second was vigorous and prolonged. The duration of the contraction was rather less than the minimum noticed by Beaumont in St. Martin's stomach, being only forty-five seconds or a little over. They recurred with marked regularity at intervals of one minute.

(*b*.) It appears somewhat strange that, despite the well-known laws of the transmission of faradaic or galvanic currents through the tissues of a living animal, authors of elaborate treatises on medical electricity should continue to speak of the ease and certainty with which the internal organs can be influenced by this agent.

Thus, in one of the most recent publications on this subject,* the statement is made at page 90 "that the stomach, liver, spleen, intestines, kidneys, and the genital apparatus, in both sexes, are directly affected by the current in general electrization. . . . The walls of the abdomen are so yielding that the soft parts beneath can, by sufficient pressure, be brought nearly or quite into coaptation, so as to make a good pathway for the current through organs largely composed of water." And again, at page 472, "The stomach, liver, spleen, kidneys, and intestines may be directly faradized by applying large electrodes with very fine (*sic*) pressure over the back and abdomen, so as to pass the current directly through the organ we wish to affect."

It is indeed true that the stomach, like all other hollow organs whose walls are composed in part of unstriped muscular fibre, will respond actively to the faradaic current when the electrodes are applied directly to the surface of the organ. Thus, marked contraction of both the transverse and longitudinal fibres of the stomach and intestines were observed in the experiments of Weber and Ludwig, where the abdominal cavity of a recently-killed mammal was opened, and the metallic conductors placed directly in contact with various portions of the stomach and intestinal canal. This is merely what would have been expected, and evidently cannot serve as a basis for any such conclusion as that contractions of the stomach can be produced by the application of the conductors of an electric current to the surface of the abdominal walls. Yet these experiments are quoted in numerous works on medical electricity, and in such way in some as to leave the impression on the mind of the ordinary reader that excitation of the abdominal viscera can be directly

* Beard & Rockwell, New York, 1871.

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effected. The almost indefinite power of transmission of an electric current along a plane of tissue moistened with saline fluid, as the deeper portions of derm or the subcutaneous tissue, is well known; and no less well is known the difficulty of compelling a current, no matter what may be its strength, to penetrate through various layers of tissue of different consistency and anatomical character.

The influence of this property of the tissues is clearly recognized by Duchenne in many places. Thus, in speaking of the faradization of the stomach, liver, lungs, and heart, he says, "Even when moist rheophores are employed, and whatever may be the strength of the current, the thickness of the thoracic and abdominal parietes will not permit the electric excitation to reach the regions situated within their cavities."* Althaus makes the same statement;† and although several authors omit any positive expression of opinion on this point, none advance any evidence in favor of the view that contractions of any portion of the gastro-intestinal canal can be induced by the application of the conductors of a faradaic or galvanic current to the surface of the abdominal walls. The case which has just been reported confirms in a most marked manner the impossibility of this. The abdominal walls were thin, and it may certainly be held that, by applying the electrodes over two points of the abdominal walls over the prominent dilated stomach, there was more chance of directly influencing that organ than by placing one conductor on the anterior wall of the abdomen, and the other opposite to it on the spine. Yet it has been seen how completely very strong currents, whether faradaic or galvanic, failed to excite contraction of the walls of the stomach, or to modify in any appreciable degree the rhythm of its peristalsis. This has nothing to do with the question of the possibility of in some other way exciting the stomach by faradization. This can, as Duchenne has shown, be accomplished indirectly by applying a metallic conductor to the branches of the pneumogastric nerve in the pharynx, or at any point down the œsophagus, while the other conductor, furnished with a moist sponge, is applied to the epigastrium. When it is desired to limit the action of the current to the stomach, the metallic olive-shaped button, with an insulated stem, may be carried down to the cardia.

I am far from desiring to depreciate the value of electricity as a remedial agent in diseases of the internal organs. Despite the immense amount of unfounded statement and gross exaggeration which is circulated through the credulous community by unprincipled men, there are a sufficient number of well-attested facts to render the whole subject one meriting careful and prolonged examination. But it is all-important that all of those who undertake this investigation and record the results of their work should pursue their observations in a strictly scientific manner, and should employ this valuable agent, electricity, in a uniform and definite manner, and in accordance with its well-ascertained physiological mode of action.

(*c.*) The next point of interest is in connection with the employment of the stomach-pump in the treatment of this case. The use of this means in the treatment of dilatation of the stomach was introduced by Kussmaul, of Freiburg, in 1867.‡ The case in which he first employed it was one of dilatation of the stomach, probably depending on ulcer near the pylorus, in which there was frequent vomiting, burning in the stomach, emaciation, and exhaustion. After the stomach was emptied, Vichy water was thrown in, and again removed by the pump, so that the organ was thoroughly washed out. For two days following the relief was complete, and the symptoms, when they returned, were again relieved by a similar procedure at intervals of two or three days. In a fortnight the patient had improved so remarkably that she might be described as a different person. In two months she had gained fifteen pounds in weight, and ultimately recovered completely.

Several other cases have since been recorded in which the employment of this mode of treatment has been followed by permanent cure of dilatation of the stomach. The advantages which are gained by the evacuation of the contents of the stomach at suitable intervals in such cases are evident. The constriction at the pylorus, or merely the dilatation of the stomach, prevents the propulsion of the food into the duodenum, after it has undergone gastric digestion. Its retention, however, is speedily followed by fermentative and putrefactive changes, while at the same time the weight of the accumulating contents constantly increases the dilatation. It is true that frequent vomiting is usually excited, but despite this the stomach constantly contains several pints of acid or fetid fluid. Thus, in the case here recorded, over four pints of fluid were withdrawn from the stomach the first time the pump was used, although the patient had taken but little food for some days preceding, and had vomited occasionally during that time. The presence of this accumulation of indigestible, fermenting fluid must cause great distress by its local action on the gastric mucous membrane, while the general nutrition suffers rapidly and severely, because all food taken into a stomach with such contents must speedily undergo fermentative changes without being at all digested.

A forcible illustration of the inability of the stomach, especially when at all dilated, to completely empty itself by vomiting, and of the danger of allowing an accumulation of undigested food to remain in its cavity for a long time, is seen in the formation of the remarkable cake of rice-flour found in my patient's stomach. This had probably existed for a considerable time, and its formation would certainly have been prevented by the earlier employment of the stomach-pump.

In cases of scirrhus of the pylorus this treatment can of course only be palliative; and yet in many patients with that disease I am satisfied that several of the worst and most annoying symptoms depend on the constant presence in the stomach of fermenting and decomposing food, the action of which is to utterly prevent digestion, and to distend and dilate the stomach so as to impair its propulsive power. The hypertrophy of the muscular coat of the stomach, which is often developed in scirrhus of the pylorus, does something to compensate for this, but cannot neutralize the evil effects; and it appears clear both that the patient's sufferings are increased and his life shortened by the existence of this state of the gastric contents.

In the case I have recorded, the relief obtained by evacuating the stomach was immediate and great. The appetite improved, the gastric distress diminished, and the eructations and vomiting ceased. It seemed also that after the removal of the irritating contents from the stomach, the organ could contract to better advantage, or that the obstructed pylorus permitted the more healthy fluid to pass in greater quantity, since the evacuations from the bowels became regular and normal. So great was the gratitude of the patient for the comfort obtained, and so positive was the improvement in many of his symptoms, that I now regret not having resorted to the use of the stomach-pump at an earlier period in the case, before the strength was so much exhausted by protracted innutrition; and it is certainly my intention

* Localized Electrization, Trans. from Third Edition by H. Tibbits, M.D., London, 1871, p. 103.

† Medical Electricity, Second Edition, London, 1870, p. 386.

‡ Deutsches Arch. f. Klin. Med., December, 1869. For an interesting synopsis of the views of Kussmaul and of those who have employed this mode of treatment, see *Dublin Quarterly Journal of Medical Sciences*, November, 1870, p. 380.

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to employ it in similar cases which may come under my care in the future.

The manifest objection to this plan of treatment would appear to be the difficulty in accustoming patients to the frequent introduction of the stomach-tube; but my experience in the present case entirely coincides with that of Kussmaul, to the effect that, in cases where there has been habitual vomiting, the sensibility of the pharynx and œsophagus is so much impaired that the passage of the tube causes little or no inconvenience. The repetition of the operation has been well borne in all cases where it has been tried, and, with proper care and delicacy in the manipulations, the treatment appears to be free from danger.

Kussmaul recommends that the stomach be washed out once in every two or three days; but it is evident that this must depend in some measure upon the improvement effected in the condition of the contents and the dilatation of the stomach. As before stated, Vichy water was used by Kussmaul in his first case to wash out the stomach, after pumping out its contents; in other cases, solution of soda, hyposulphite of soda, or creosote water, have been employed. In the present case, pure tepid water was injected, and with the effect of very greatly improving the condition of the gastric contents. After the operation the stomach should be allowed to remain quiet for an hour or two, when a moderate meal of digestible food may be taken.

NOTE ON A CASE OF CHLOROFORM POISONING.

BY A. FRICKE, M.D.

ON the morning of the 1st of March, through a mistake of her niece, who is nursing her, Mrs. H., æt. 45, took, in a quarter of a tumblerful of water, one tablespoonful of chloroform, instead of the same quantity of liq. ammon. acet. She complained at once of the burning sensation the dose produced, and her niece, instantly perceiving the mistake she had made, hastened, with admirable presence of mind, to the kitchen, where she procured a pitcherful of lukewarm water, a pint and a half of which she made Mrs. H. swallow immediately. Although eight minutes only had elapsed since she had taken the chloroform, yet she was at this time entirely unconscious. The copious draughts of water provoked vomiting, during which act it is probable that most if not all of the chloroform was thrown up. At the same time her bowels and bladder were evacuated involuntarily. I saw her soon after the accident; she was unconscious, but could be roused. She was freely stimulated with brandy, and salad oil with the yolk of an egg was administered to her. In the afternoon her condition had very much improved, but she was still very feeble, and said she felt queer twitchings in her body, which lasted over twenty-four hours. She describes her sensations after taking the chloroform as follows: a rush of something to the head, dizziness, flashes of light before the eyes, and tingling of the limbs.

A CASE OF POISONING BY OPIUM

TREATED BY HYPODERMIC INJECTIONS OF SULPHATE OF ATROPIA.

BY J. L. CARTER, M.D.,
of Jackson, Miss.

I WAS asked, January 31, 1871, to attend Mr. ——, æt. 27, who had attempted suicide about two hours previously,—first by taking laudanum, and afterwards by shooting himself. The ball struck the fourth rib on the left side, and was deflected by it, so that no serious injury resulted. The quantity of laudanum taken was ascertained to be about a fluidounce. When I entered his room I found him crying and regretting that the wound was not a fatal one. The respiration was slightly disturbed, the pupils were contracted, and there was some drowsiness. Soon after my arrival Dr. Harrington came in, and we at once proceeded to administer twenty-five grains of sulphate of zinc. No effect being produced by it, we had recourse to the stomach-pump, with which we washed out the stomach four times, distending it to its full capacity each time. The liquid obtained in this way did not smell of laudanum, and there was therefore reason to fear that the whole quantity had been absorbed. We then determined to try the antidotal powers of belladonna, and with this object injected at six o'clock, hypodermically, one-thirtieth of a grain of sulphate of atropia, dissolved in a few drops of water. At this time the drowsiness had very much increased, and it was necessary to force the patient to walk up and down the room, to whip him with switches, and to apply the douche of cold water to his face, in order to keep him awake. At 2 P.M. the atropia was again administered in the same way and in the same dose. At this time the pupils began to dilate. Electricity from a horse-shoe battery produced very little effect, and it was found impossible to prevent him from falling to sleep. At 2¼ P.M. I injected one-sixtieth of a grain. This did not prevent the supervention of profound coma and absolute insensibility to all external irritants, during the continuance of which the patient was vigorously rubbed. Injections of one-thirtieth of a grain were made at 3, 4, 5, 6, 7, 8, 9, 10, and 11 P.M.; so that in all eleven injections of the thirtieth of a grain and one of the sixtieth were given. After the fourth injection the face was observed to be suffused, the pulse to be 140, but of good volume, and the respiration only between four and five in the minute. After the fifth injection the pupils began to dilate, and after the sixth they were dilated to their full extent. The pulse sank to 125, and the respirations became a little more frequent. The sensibility of the surface returned after the eighth injection, and at ten o'clock the patient manifested, for the first time, some signs of pain at the use of the hypodermic syringe. After the injection given at eleven o'clock the countenance became more natural, and the pulse and respiration were nearly normal. At five o'clock next morning he was able to converse with his friends, and three hours later he could walk about his room. The next day recovery was complete.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF JAMES H. HUTCHINSON, M.D.

FACIAL PARALYSIS TREATED BY STRONG HYPODERMIC INJECTIONS OF STRYCHNIA.

THE patient whose history is given below in full became affected with facial paralysis of the right side, in consequence of severe injuries received nearly nine years before coming under observation. As ordinary remedies did not seem capable of bringing about any improvement, it was resolved to have recourse to the strong hypodermic injections of strychnia, as recently recommended by Mr. Barwell, of London, in the St. Thomas Hospital Reports. He recommends that five and even seven half minims of the following solution should be injected:

Strychnia, gr. ij;
Acid. Hydrochl., ♏ v;
Spirit. Rect., ♏ xv;
Aq., ♏ lxx.

The mixture should be warmed slightly before being used, as at a temperature below seventy degrees it is liable to become turbid. Each minim will of course represent the one-forty-fifth of a grain of the alkaloid. Beginning at first with only two minims, the dose was finally increased to three minims, at which point it was thought most prudent to stop. As will be seen by the notes, none of the usual effects of strychnia poisoning was produced; and although the result was not favorable, yet I should be inclined to try the same treatment

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in cases in which the paralysis had not existed for so long time. Mr. Barwell recommends these strong injections especially in cases of infantile paralysis, and says that they should always be used when it is desired to produce a powerful local effect. Where, on the other hand, it is desired to produce a constitutional effect, a more dilute solution is to be preferred.

Charles Lynch, Ireland, æt. 42, a clerk, unmarried, admitted January 25, 1871.

In July, 1862, while serving as soldier in the volunteer army of the United States, being on guard duty at night on a railroad, he was struck by the cow-catcher of a locomotive and thrown from the track. He received injuries of a serious character about the head. There was a fracture of the anterior edge of the floor of the right orbit; violent concussion, followed by hemorrhage from nose, mouth, and right ear; and injuries of his right foot, which necessitated a partial amputation. For several days he remained unconscious, and on recovering found the entire right side of his face paralyzed. At first this paralysis was very marked. It slowly but gradually improved during the three years immediately succeeding the accident, during which he was treated in several military hospitals. Since 1865 there has been very little change.

January 25.—On admission, found to be suffering from "irritable heart," for which he was given ext. belladonna, gr. $\frac{1}{8}$, quiniæ sulph., gr. i, t. d., under which treatment he has greatly improved. Stopped February 13.

February 15.—His general condition has greatly improved. The heart's action is regular; he is free from pain, and in every respect well. The paralysis of the seventh nerve on the right side presents its usual appearance. It is not, however, complete; there is still some power of movement. The surface is smooth and the expression nil, contrasting strikingly with the left side of the face, which is mobile and wrinkled. The lower eyelid droops a little, and he cannot close the eye, the cornea of which is in consequence slightly hazy. The effort to shut the eye produces the usual contortion of the face; the left eyelids are squeezed tightly together, while the right are but very slightly approximated, the ball being, however, rolled upward. The right ala of the nose falls inward on inspiration, and the sense of smell in the corresponding nostril is relatively obtunded. The mouth is drawn to the left; the tongue is not deflected to either side. The function of the right ear is very feebly exerted; nevertheless, he is able to catch some sounds. There is no obvious difference in the growth of the beard on the two sides. Irregular twitchings of right cheek. Mastication is well performed; he does not drop pieces of food or liquids from his mouth. Urine,—nothing abnormal. Appetite good; bowels fairly regular. There is no paralysis of soft palate. Sleeps excellently.

February 13.—Treatment: Syr. ferri, quiniæ et strychniæ phosphatum, ℥i, s. t. d.

February 15.—Hypodermic use of the alkaloid strychnia commenced; gr. $\frac{2}{45}$ injected into tissues over ramus of the jaw. No effect observed. Patient stated subsequently that it made him sleep.

February 16.—Gr. $\frac{2}{45}$ injected. No obvious result.
February 17.—Gr. $\frac{3}{45}$ " " "
February 18.—Gr. $\frac{3}{45}$ " " "
February 19.—Gr. $\frac{3}{45}$ " " "

Patient has gained very much in flesh; no constitutional effect has followed the use of the remedy other than beneficial. Perhaps the twitching of the right side of the face has increased, and a little more power of motion exists.

February 21.—Gr. $\frac{3}{45}$ injected.
February 23.—Gr. $\frac{3}{45}$ "
February 25.—Gr. $\frac{3}{45}$ "

The injections are always given at bedtime, and the patient states that they in no wise interfere with his rest.

February 26.—The application of the induced current gives rise to muscular contractions of affected parts. It has been made every other day for the last week. Ordered to be repeated daily. As no obvious effect has been produced by the hypodermic injections of strychnia, they were discontinued, and on March 7, 1871, the patient was discharged.

WILLS OPHTHALMIC HOSPITAL.

CONTRACTION OF PUPIL, WITH PARTIAL PARALYSIS OF ACCOMMODATION.

SERVICE OF GEORGE C. HARLAN, M.D.

MARY N., forty-six years of age, applied for treatment at the dispensary of Wills Hospital. Five weeks before, she had had complete hemiplegia of left side. At the time of examination there was still partial paralysis of that side, of both motion and sensation. She could move the arm feebly and walk with slight assistance.

There were ptosis and divergent strabismus of the left eye. The pupil was intermediate in size, and immovable, dilating irregularly under atropia. Ophthalmoscopic examination showed decided white atrophy of optic disc.

Vision $= \frac{20}{L}$ Snellen's Types.

She complained that she could not read or sew with the right eye, though she had been able to do so easily without glasses before her sickness. The pupil was contracted almost to a pin-point, and immovable. $v = \frac{20}{xx}$, $a = \frac{1}{18}$. Though her distant vision in that eye was perfect, small print could not be distinguished nearer than eighteen inches. She could read the smallest print with ease at nearer points, with the aid of convex glasses of proper focus to accomplish the necessary accommodation, showing that the ciliary muscle only was at fault.

In the left eye, the association of symptoms was just what we would expect to find in paralysis of the third pair and optic nerve; but the right presents an interesting physiological anomaly in the spasm of the constrictor fibres of the iris and paralysis of the ciliary muscle, both supplied by filaments of the third pair from the lenticular ganglion. We usually find that these muscles not only act together in health, but that they are similarly affected by disease or by the action of drugs. We sometimes meet with dilatation of the pupil without relaxation of the ciliary muscle or relaxed accommodation with a normal pupil, but I have never before met with a case, or seen one recorded, in which there were at the same time spasmodic contraction of the pupil and paralytic relaxation of the accommodation.

The only explanation that occurred to me was that the nerve-centre, from which the sphincter pupillæ derived its motor influence, might be in a state of excitation preceding paralysis, and that in a little while longer the pupil would be found dilated.

It would have been interesting to try the effect of atropia and of calabar bean, as well as to obtain a more accurate history of the case; but the patient failed to return, according to promise, and we have been unable to find her.

TRANSFUSION OF BLOOD IN POISONING BY CARBONIC OXIDE.—Prof. Hüter, of Greifswald (*British Medical Journal*), related, at a meeting of the Medical Society of that place, a case of poisoning by carbonic oxide, in which he successfully employed transfusion of blood. The patient, a man 26 years old, was found insensible after four or five hours' exposure to the gas. Artificial respiration had failed of success. When Dr. Hüter arrived, half an hour after he was found, the respiration was very superficial and intermittent, the pulse small and frequent, the pupils did not act, and the cornea was quite insensible. A pound of defibrinized arterial blood was injected into a vein of the patient's left arm, and, respiration having by this time ceased, artificial respiration was kept up while the injection was being given. After about half the blood had been injected, the blood flowed more freely from the cut vein. At the end of the injection the pulse had become fuller and slower, and natural respiration had returned. In half an hour the pupils were sensitive to light, and the patient moved his arm a little. For four hours the tongue had to be held forward, when its tendency to fall back ceased, and consciousness returned. The recovery was complete on the fifth day.

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THE MEDICAL TIMES.
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EDITORIAL.

SETTLEMENT OF STAFF RANK IN THE NAVY.

WHEN the bill to regulate the rank of staff officers of the navy, which was brought forward by the Hon. A. F. Stevens, passed the House of Representatives almost unanimously, January 23, very many persons supposed the long-vexed question would be satisfactorily disposed of. That bill was in principle the same as the law which establishes the rank of medical officers in the army, where, according to Gen. Sherman, it works well in practice. The Senate preserved the general details of Mr. Stevens' bill, but eliminated from it the principle on which it was based by substituting relative in place of positive rank; and this relative rank is so qualified and defined in the context of the law that the chief if not the only property of rank conferred on staff officers is precedence. It is believed, however, that if this law is accepted in good faith by the line of the navy, the staff will rest satisfied with its provisions. Future experience only will settle this doubt.

We learn from a pamphlet* by Dr. Frederick James Brown that the medical officers of the English navy have relative rank of sub-lieutenant, lieutenant, commander, captain, commodore, and rear-admiral on the active list, and on the principle that "relative rank shall carry with it precedence and advantages attaching to the rank to which it corresponds." But, although the principle is fully admitted in clause 10 of the warrant of May 30, 1859, to regulate all combinations of the land and sea services, the Admiralty, in regulating the affairs of the navy, puts it in practice only exceptionally. Dr. Brown complains because rank in the line counts by *seniority*, while in the medical corps it counts by years of *service*, which in effect destroys the perfect equality which, he contends, should exist in all matters of allowances, pensions, retired pay, widows' pensions, and children's allowances.

In spite of the scale of relative rank of medical officers in the English navy, they are not satisfied, and the service is so unpopular among medical men generally that there are not candidates enough to fill the vacancies in the navy medical corps. If the suggestions of Dr. Brown should be adopted, which look to placing medical officers of the navy on a perfect equality with those of the army relatively in all respects to the line, according to the degrees of their relative rank, the difficulty of filling the naval medical corps will disappear. The purpose of Dr. Brown's effort is to show that all classes of officers should be dealt with "on the principle of equality of privileges to grades of rank relatively equal." He is evidently master of the subject, and seems to possess the unreserved confidence of the profession, both in and out of the service.

The provisions of the law recently enacted to establish the rank of medical officers in our service are substantially as follows:

The officers of the medical corps on the active list of the navy shall be—

Fifteen medical directors, who shall have the relative rank of captain;

Fifteen medical inspectors, who shall have the relative rank of commander;

Fifty surgeons, who shall have the relative rank of lieutenant-commander or lieutenant; and

One hundred assistant-surgeons, who shall have the relative rank of master or ensign. Those who are found qualified for promotion on examination after three years' service shall have the relative rank of lieutenant or master.

Medical officers who have served forty-five years, and those who are retired at sixty-two years of age, shall, on the completion of forty years of faithful service, have the relative rank of commodore. Those who are retired "for causes incident to the service" before attaining the age of sixty-two years retain the same rank they held on the active list at the time of retirement.

No person under twenty-one or over twenty-six years of age can be appointed an assistant-surgeon.

The attributes of rank in the line, or positive rank, are precedence, right to quarters, right to succession in command and to promotion according to date of commission. Under the common law of the service and departmental regulations there are certain personal privileges, immunities, and ceremonial honors annexed to each degree of rank.

This law makes the qualities of relative rank very different. It inhibits right to quarters, and its precedence is determined, not by date of commission, but from original entry into the naval service, after adding six years to the actual period of the medical officer's service. For example, the medical officer who was commissioned January, 1866, reckons his precedence with line officers from January, 1860. His precedence or degree of relative rank at this time is thus made contingent upon the degree of rank which the line officer who entered the Naval Academy in January, 1860, has now attained. The surgeon of January, 1866, has now the relative rank of lieutenant-commander, provided that the naval cadet appointed January, 1860, has been promoted to that grade; otherwise he has the relative

*The Naval Medical Service: its Present State and Prospects, with Suggestions for its Improvement. By Frederick James Brown, M.D., Lond. and Edinb., F.R.C.S.; Fellow of the University College, London; Consulting Surgeon to St. Bartholomew's Hospital at Rochester; formerly Assistant-Surgeon in the Royal Navy. Second Edition. 8vo, pp. 60. J. E. Adlard, London, 1871.

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rank of lieutenant. If the naval cadets appointed in the spring of 1865 have not yet been advanced beyond the grade of ensign, assistant-surgeons commissioned in the spring of 1871 have the relative rank of ensign, and are quartered in the steerage with ensigns and midshipmen; but if the naval cadets of 1865 are now masters or lieutenants, the assistant-surgeons of 1871 have the rank of master, and are messed and quartered in the ward-room. If the cadets of 1865 were now lieutenant-commanders or commanders, the assistant-surgeons of 1871 would still have the relative rank of master, and no more.

Under the provisions of this law the relative rank and precedence of surgeons, passed-assistant-surgeons, and assistant-surgeons are contingent, within specified limits, upon the rate of promotion of officers of the line, but the relative rank of medical directors, medical inspectors, and medical officers retired after forty-five years' service, as well as those retired at sixty-two years of age, on the completion of forty years' service, is fixed. The precedence of medical officers with each other is not determined, as heretofore, by date of commission in the grades, but by date of original entry into the naval service.

Commanding officers of vessels of war and of naval stations have precedence of all officers placed under their command, without regard to the degree of relative rank the latter may have.

"To every vessel of war and naval station, the law authorizes the appointment of an aid or executive officer," whose orders, though he is forbidden to exercise any authority independently of his commanding officer, are to be regarded as emanating from the latter, who is thus made legally responsible for the official acts of his aid. While executing the orders of his commander, he has precedence of all staff officers of the ship or station, without regard to their relative rank; but those staff officers who are his superiors in relative rank "have the right to communicate directly with the commander:" that is, to report directly to and receive orders directly from him. In processions on shore, courts-martial, summary courts, courts of inquiry, boards of survey, and all other boards, line and staff officers take precedence according to rank,—that is, according to precedence reckoned from original entry into the service, after adding six years to the date of entrance of staff officers.

The title of the chief of the bureau of medicine and surgery is changed to Surgeon-General; and, although his is a civil commission, and his annual compensation is provided for in the appropriations for the civil service, he is to have the relative rank of commodore.

The law provides that "chiefs of bureau may be appointed from officers having the relative rank of captain in the staff corps of the navy on the active list," and that "any staff officer of the navy who has performed the duty of chief of a bureau of the Navy Department for a full term [four years] shall thereafter be exempt from sea-duty, except in time of war."

The first of these provisos seems designed to secure to the office of chief of bureau only men whose experience has made them practically familiar with the requirements of all the grades of the vocation, to make the office a reward for past services, and remove it beyond the reach of smart young aspirants or tuft-hunters; and the second, which apparently has a retroactive or ex-post-facto application, to excuse from sea-duty any one who may have been prematurely made chief of bureau without having previously served in his grade at sea. One having the relative rank of captain at the time of appointment may unreservedly confide in the discretion of the Secretary of the Navy to assign him to duty after leaving a bureau, without specific legislation on the point.

The rates of compensation of medical officers have not been altered by this law. They were stated in our issue of December 1, 1870, p. 80.

There are about twenty vacancies in the medical corps. Now that the question of rank has been settled, it may be presumed that these will be promptly filled by properly-qualified candidates. The board of naval medical examiners is in session at the Naval Hospital in this city. Permission to be examined may be obtained from the Secretary of the Navy, or from the Surgeon-General. The application should be accompanied by testimonials of moral character, habits, etc.

THE SUIT AGAINST PROFESSOR GROSS.

THE suit for malpractice, in which Prof. Gross, of the Jefferson Medical College, and his son, Dr. Samuel W. Gross, were the defendants, was brought to a sudden close by the Judge (Lynd) directing that a nonsuit should be entered, the plaintiff having utterly failed to make out a case against them.

It appeared upon the trial that a colored man, who had lost his leg in consequence of a wound received during the late civil war, applied to Prof. Gross to perform an operation for the cure of an aneurism which had formed in the stump as the result of a fall. It further appeared that the opinion of other surgeons had also been asked, and that this had been in some cases unfavorable to operative interference; but it does not appear that the surgeons previously consulted were of great eminence, and the attempt to prove that the operation had been declined at the Pennsylvania Hospital failed.

The patient, who is represented to have been intelligent and educated, when he applied to Dr. Gross for relief, could not, therefore, have been ignorant that the operation, although affording him the best chance for life and health, was not unattended with danger; but we have also the best authority for saying that its nature, as well as the risks which he ran in submitting to it, was fully explained to him before it was performed, and that he was heard to declare immediately before the operation that he would have it done at all hazards. No want of skill in the performance of it, and no want of due attention to the patient afterwards, was

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alleged against the defendants; and the prosecution seems to have hinged upon the fact that the defendants had had the misfortune to lose a patient after performing an eminently justifiable and proper operation. So far from any negligence having been proved, the patient seems to have been watched with a care and assiduity which certainly could not have been exceeded if he had been a millionaire, instead of being a poor man, as he was, unable to pay his physicians for the services they rendered to him. After the performance of the operation at the public clinic of the Jefferson Medical College, he was taken to his home in Addison Street, and there carefully nursed day and night by physicians and advanced students, and when hemorrhage occurred, as it was feared it might, assistance was promptly at hand.

Notwithstanding that it was clearly proved at the trial that the deceased had not lived happily with his wife and had been separated from her, and that she was not with him at the time of the operation,—only coming to him later to nurse him,—she nevertheless appeared as the nominal plaintiff, but seems to have done so with great reluctance, for three weeks before the commencement of the suit she called on Prof. Gross to say that she disapproved and discountenanced it. His mother also seems to have been very averse to its being instituted, for, hearing of the lawyer's intention to disinter the body, in order to have a post-mortem examination of it made, she forbade it, and threatened to prosecute him if he did so.

The plaintiff's counsel may, therefore, be assumed to be the real plaintiffs, especially as it was clearly brought out in evidence that they had agreed to sustain all the expense of the prosecution, in consideration of receiving a percentage of the damages.

There was so little in the case upon which to found a prosecution, that the conclusion is irresistible that it was instituted in the hope that the defendants would prefer to compromise rather than go into court. Let us hope that the manly conduct of Professors Gross and Reese and Dr. Hall, as well as the result of the suits brought against these gentlemen, has convinced the most unscrupulous among the legal fraternity that the members of our profession, one and all, intend to resist all attempts to levy black-mail upon them. Notwithstanding the aversion which they feel for litigation, physicians have a sufficient sense of what is due not only to themselves, but to the profession of which they are members, to prevent them from being parties to a dishonorable transaction.

Prof. Gross will of course suffer no loss in the estimation of any right-minded or intelligent member of the community; and if there be any such who has thought for a moment that patients are operated upon without their consent, and then shamefully neglected, the Judge's action in dismissing the case without hearing the defence must have thoroughly convinced him of his mistake. The sympathy of the whole profession has been extended to Prof. Gross; but, gratifying as it must be to him to see the high estimation in which he is held by his brethren in this city, we feel that it must be some time before he will recover from the mental worry caused by this most vexatious trial. It is no slight mortification to a gentleman who stands so high in his profession for skill and honor, and who is so jealous of his reputation in these respects, to have his name bandied about the town and from court-room to court-room, as Dr. Gross' has been during the past few months.

We do not know whether the real offenders in this case are beyond the reach of the law. If they are, there is certainly a defect in the law. If the reputation of a gentleman may be attacked with impunity, and he himself dragged into court, his time wasted, and his mind harassed by any briefless lawyer who prefers the prospect of a contingent fee to a just cause, then the courts of justice, instead of affording protection to the citizen, really become instruments of oppression.

We have only one word more to add, and we are sorry that it is not likely to reach those for whose benefit it is intended,—the nominal plaintiffs in these suits; and that is, that lawyers who outstrip their clients in their eagerness to engage in suits are not likely to prove good advisers, and that respectable members of the legal profession do not usually accept contingent fees from poor people.

CHAIRS OF DENTISTRY IN MEDICAL SCHOOLS.

WE have received a copy of an address by J. H. Foster, M.D., delivered before the American Academy of Dental Science, at its third annual meeting, in Boston. Replete, as it is, with a sentiment which stamps its author as the representative of a standard of professional dignity worthy of imitation in any profession, and abounding more than addresses on similar occasions usually do in practical suggestion, it should be generally read by members of the medical as well as the dental profession.

We were ourselves, however, most interested in the following paragraph, on the subject of dental education:

"I have thought that, in this respect, one or more dental chairs in a medical college, filled by competent representatives of our specialty, combined with a private school education, under the best instructors, capable of more direct practical benefit." (*Sic.*)

This is not a new idea. So early as April, 1851, Dr. E. B. Gardette, a well-known and highly-respected dentist of this city, published in the *American Journal of the Medical Sciences*, and later in the *Medical Examiner*, "a proposition to establish a lectureship on Dental Surgery in the medical colleges."

Why this suggestion was never followed we do not know. Certain it is, however, that, as a consequence, there are now in successful operation in this city two dental colleges, each having, in addition to what may be termed the dental chairs, three professorships common to medicine and dental surgery,—one of anatomy, a second of physiology, and a third of chemistry. The average attendance of the combined schools is at least one hundred and fifty, the addition of which to either

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of our colleges, in these days of small classes, would be quite a material contribution.

The day has arrived when the prejudice—always unfounded—of the medical profession against practitioners of dental surgery should cease; and we believe it has, in the main, disappeared. The relation between the two professions is, however, not sufficiently intimate, as is indeed implied in the circumstance that they are considered two professions, whereas they should be one; or, more strictly, dental surgery should be considered a specialty in general surgery, with which it has quite as close a relation as any of the acknowledged specialties of surgery.

It is known to many that the addition of dental chairs has been successfully made within the past few years to the Medical Department of Harvard University, and that the degree of D.D.S. is now conferred by that medical school. We doubt, however, whether it would be possible or desirable, in the present established condition of dental schools in this city, to secure a union of educational interests.

CORRESPONDENCE.

THE LETTER "G."

To the Editor of the Medical Times.

SIR:—I write to complain of the letter "G." It has put me to the unnecessary expense of $6.50, 20 per cent. off, or $5.20 nett. The case is simply this. Seeing advertised in the daily papers a new volume of Surgical Memoirs, published by the U. S. Sanitary Commission, which was said to contain (*inter alia*) an "analysis of four hundred and thirty-nine recorded amputations in the CONTIGUITY of the lower extremity," I hastily and, as the sequel has proved, most rashly bought the book. On opening it, there, sure enough, on the title-page was the name of the wished-for paper. Here, thought I, is treasure-trove indeed!—439 amputations in the CONTIGUITY, 439 disarticulations, 439 amputations at the hip, knee, and ankle,—all analyzed by that excellent surgeon Dr. Stephen Smith, "edited" by Prof. Frank Hastings Hamilton, and published by the liberality of the U. S. Sanitary Commission!

Pleased with my purchase, I began to turn the pages, when, to my horror and alarm, I found that in the caption of Dr. Smith's paper itself the 439 amputations in the CONTIGUITY had withered away into 439 amputations in the CONTINUITY, and that, in point of fact, instead of invaluable and unprecedentedly extended statistics of amputations at the hip and knee, I was to be fobbed off with some 150 commonplace amputations of the thigh, and some 280 still more commonplace amputations of the leg!

I appeal to you, Mr. Editor, is not this carelessness, in the language of the immortal Dogberry, "most tolerable and not to be endured"?

Yours, more in sorrow than in anger,

V. Q. P.

CHLORAL IN CANCER.—Dr. W. Cooke commends most highly (*Med. Times and Gaz.*) the use of chloral in cancer. Where there is persistent suffering, ten grains three times a day—otherwise twenty grains at night—are the doses he has used it in.

TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a meeting of the Pathological Society, held Thursday, March 23, 1871, the President, John Ashhurst, Jr., M.D., in the chair,

DR. WM. PEPPER presented the specimens from a case of *scirrhus of the pylorus, with great dilatation of the stomach and visible peristaltic contraction of the stomach-walls.* He read a history of the case, together with some observations on the use of the stomach-pump in removing fermenting gastric contents,—for which see current number of *The Medical Times.*

DR. H. C. WOOD said he was glad to find that the results of Dr. Pepper's attempts to excite peristalsis by electricity coincided with his own. He had never succeeded, though he had made numerous attempts, and theoretically it should be accomplished. He thought much that had been said and written about the effects of the application of electricity to the deeper tissues was unfounded. He had, however, frequently produced these effects in the lower animals, and had produced peristalsis throughout the whole bowel in rabbits. He thought these external applications of electricity seldom reached the deep-seated tissues, and if they did, they must be so much weakened as to have practically no effect. He thought no one could reach the sympathetic with any current applied to the external integument.

DR. PEPPER said he thought that there was much to be accomplished by the application of electricity to the viscera, though he agreed with Dr. Wood that it was absurd to expect to accomplish it by a current through the skin, in the case of an organ which, like the stomach, was so widely separated anatomically and functionally. If, however, means were taken to reach a viscus, as the stomach, directly, by the passage of metallic conductors, marked effects might be produced.

DR. S. W. GROSS presented a specimen of *hydatid mole, or multiple cystoid myxoma of the chorion.*

The case occurred in the practice of Dr. Demmé, of this city.

The specimen presented the well-known appearances of hydatid mole, the villi of the chorion having been converted into a racemose mass, composed of a multitude of clear vesicles, which varied in size from that of a mere point to that of a Malaga grape. Their shape was usually pyriform; many were globular, and some were cylindroidal. They were furnished with slender but tough pedicles, through which they hung from each other, and the large vesicles gave origin to smaller vesicles, projecting from the walls of which were still smaller pediculated ones. Puncture of the vesicles was followed by the escape of a clear, transparent fluid, which had the chemical properties of mucin. After their contents had drained off, there remained a fine, flocculent structure, which was easily torn apart by needles. Subjected to the microscope, this was seen to consist—in addition to hypertrophied villi, the extremities of which were rounded, clavate, or furnished with nodular projections—of small, round, pale, nucleated cells, imbedded in a hyaline matrix, the latter of which showed, at many points, a fibrillar arrangement, with much granular infiltration. The largest pedicles contained a few fusiform cells, which were absent in the other portion.

In connection with the above case, DR. S. W. GROSS also exhibited specimens which illustrated more fully-developed *myxomatous tissue.* They consisted of five mucous or gelatinous polypi of the nose, which were remarkable for their number and size, and were removed from a man forty-eight years of age. The obstruction of the nasal passages was complete, and the anterior nares, from which they protruded, were much expanded. The largest was three inches in length, and the smallest of the remainder measured fully two inches. At a subsequent operation seven additional polypi were extracted.

They were made up of large stellar and fusiform cells, the anastomosis of their prolongations forming an areolar struc-

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ture, in the interstices of which mucous corpuscles were very abundant. The nuclei of many of the cells were granular. In addition to these elements, there were present nucleated oil-cells, nasal epithelium undergoing fatty metamorphosis, and crystallized margarine, the latter probably due to the preservation of the specimens in alcohol.

DR. H. C. WOOD, JR., presented the specimens from a case of *intense atheroma of the arteries, veins, and valves of the heart, with total loss of electro-contractility of the muscles of one leg.*

Conrad S., aged 84, a German, was admitted to the wards of the Philadelphia Hospital, February 13, 1871. At time of admission he was weak, but made no other complaint.

February 17.—Noted a loud, prolonged, blowing murmur, synchronous with systole of heart; greatest intensity in third interspace to right of sternum, but very loud beneath the clavicle, where it appears to be lessened in intensity by raising arm. Also a distinct systolic murmur at apex. No murmur audible along arteries or back. Second aortic sound without murmur, but very feebly accentuated. On forced breathing, intercostal spaces of left side very distinct; not so on right side. Arteries everywhere atheromatous. In right axilla was a globose tumor the size of a walnut, pulsating in all directions, readily grasped by the fingers, and evidently immediately connected with the axillary artery, but not giving rise to any murmur or thrill.

On the 18th inst. he began to be delirious,—talking a little to himself, wanting to get out of bed and walk around. Marked rigidity of all the muscles. No distinct paralysis; unable to stand. Pupils strongly contracted, immovable. Auscultation revealed in lungs posteriorly, subcrepitant rales. Very marked loss of sensibility in both legs. In arms, sensibility appears to be also diminished. Moves his legs very slowly and with difficulty. All the muscles rigid,—tetanic.

February 24.—Almost unconscious; cannot be made to answer questions. Does not move left leg, which almost completely fails to respond to strong, induced, interrupted current. In right leg, musculo-contractility to same current apparently somewhat impaired.

At 3½ o'clock P.M. he died.

Autopsy.—Cadaver tolerably well nourished. Brain containing a large amount of serous effusion, which ran out in quantity when skull was opened. Membranes opaque. Arteries of circle of Willis intensely atheromatous. Brain-substance apparently normal. Heart decidedly hypertrophied. Aortic valves covered with profuse, hard, bony vegetations. Mitral valves thickened, not very atheromatous, but an almost entire bony ring in the auricle surrounding the auriculo-ventricular orifice. Aorta enlarged; much of it bony in feeling. Right axillary artery very atheromatous, surrounded by a mass of enlarged glands, forming the pulsating tumor distinguished during life. Left femoral artery intensely atheromatous, occupied by a dense white thrombus. Femoral vein also intensely atheromatous, remaining when cut as a wide-open, gaping pipe; a whitish, firm, tough, fibrinous thrombus, nearly a foot in length, was drawn out from it.

Left lung, nearly normal, very dark-colored. Right lung, upper lobe covered with a cap one-fourth of an inch thick, of dense membrane, intensely solid, apparently contracted, almost black in color.

DR. F. ASHHURST presented a *hypertrophied and dilated heart*, with *patulous mitral valve*, the result of adhesion, from John L., aged twelve years, who came under his care ten days prior to his death, complaining of difficulty in breathing and general discomfort. Upon examination, his heart presented marked evidence of disease. The area of cardiac dulness was increased, and a decided murmur was detected with the first sound of the heart. The pulse was about 120 per minute, and continued about the same during the attack. The urine contained phosphates at first, and later albumen. There was general anasarca, which subsided somewhat under the use of diaphoretics, etc. No previous history could be obtained, and it was concluded that he was suffering with mitral regurgitation.

The post-mortem examination was made twelve hours after death: the heart only was examined. The pericardium contained about f℥viij of serum, and, upon opening the heart, the left auricle and ventricle were found to be greatly dilated, and the mitral valve so closely bound down as to be practically useless. The other valves were healthy.

DR. W. G. PORTER presented the specimens from a case of *primary cancer of the skin*, with extensive *secondary deposits* involving the *thoracic and abdominal viscera.*

Rosanna C., colored, came under Dr. P.'s care as a patient of the Philadelphia Dispensary in the latter part of December last. She was forty-nine years of age, of temperate habits, married, and the mother of several children, none of whom were, however, living at that time. Of her family history she could tell nothing, but she had never known any of her family to be affected by cancer. She was rather thin, and stated that she had lost considerable flesh. About two years before, she had first discovered a small tumor, about the size of a walnut, over the linea alba, just above the umbilicus. It was hard, painless, and had increased little if at all in size until about three months ago, when it began to ulcerate and enlarge rapidly. At the time of the first examination her condition was as follows:

She was so weak as to be incapacitated for work, but she was not confined to bed. Her appetite was poor, her bowels constipated; she was losing flesh rapidly, and becoming weaker every day. She suffered no pain, but was nervous, and slept badly at night. The tumor overhung the umbilicus, was about eight or ten inches in circumference, was rapidly ulcerating, and from it, as a centre, several ulcerated nodules proceeded in different directions. In the left breast there was a large hard mass, presenting the ordinary characters of scirrhus in its early stage. The glands of the left axilla were very much enlarged. She was placed on a tonic and stimulating course of treatment, but she became weaker and weaker; the left breast began to ulcerate, the right soon contained a deposit similar to that in the left, the superficial glands on both sides of the body began to enlarge, and on the 13th of March she died, exhausted.

The *post-mortem* examination was made on the 14th of March, about thirty hours after death. The abdominal tumor was removed by cutting around it through the tissues into the peritoneum. The *peritoneum* and muscular structures above it appeared to be healthy. The skin and areolar tissue were very much changed, hardened, and infiltrated with cancerous material. The *liver* was of very peculiar conformation, irregular in outline, and contained numerous cancerous deposits, both on its anterior and posterior surfaces, best marked, however, at the lower part. The *kidneys* were healthy, except one small deposit in the left one. The *supra-renal capsules* on both sides were extensively diseased. The *stomach* was normal in size. The pylorus seemed a little thicker than usual, but there was no deposit about or obstruction of its orifice.

The *lungs* had numerous deposits scattered over their surface, more particularly on the superior and inferior surfaces of the lobes. Several deposits were also noticed on the diaphragm. The anterior and posterior mediastinal glands were likewise affected. Both breasts were involved: the right presented simply a scirrhous mass; the left was ulcerated. The glands of left axilla were much enlarged, and contained cancerous deposits. The inguinal glands were healthy.

The specimens were referred to the Committee on Morbid Growths, which reported, April 13, "The diseased portions are well-marked examples of cancer. The tumor of the skin appears to have been the primary seat of disease, and presents the well-known characteristics of medullary cancer. The metastases were very numerous, secondary deposits having been formed in both breasts, in the anterior and posterior mediastinal glands, the lungs, liver, supra-renal capsules, and there was also a small nodule in the cortical substance of the left kidney. The number of secondary deposits, together with the great rarity of primary cancer of the skin, constitutes, in the opinion of your committee, the chief point of interest in the case. The starting-point of the new growth appears to have been the subcutaneous cellular tissue. Lebert (as quoted by Förster) gives twenty-one cases of primary cancer of the skin, of which eleven were of the face, four on the penis, three at the outer part of the vulva, one on the leg, and one (as in the present case) in the epigastric region."

DR. JOHN ASHHURST, JR., exhibited the specimens from a case of *extensive fracture of the skull, with intracranial hemorrhage, laceration of brain, etc.*

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The patient was admitted to the Episcopal Hospital about 4 A.M. on March 23, 1871, having fallen headforemost from a railway-train some four hours previously. The house-surgeon, Dr. W. H. Bennett, found upon examination that there were contusions upon the left side of the head, with bleeding from the left ear, but no external signs of fracture. The patient was profoundly comatose, with a full, slow, but irregular pulse, and stertorous breathing.

The right pupil was widely and the left somewhat dilated. The pulse-rate at five o'clock was noted at forty-four to the minute.

Death ensued about noon, and an autopsy was made some hours later. The tissues of the scalp contained a large quantity of dark fluid blood, and on laying bare the vault of the skull, a fissure was observed, which involved the left temporal, left parietal, and frontal bones, and which at its centre gaped to an extent of fully one line. The calvaria was carefully removed, when the fissure could be traced through the *left* temporal bone (where it was curiously branched, constituting by its ramifications what the older surgeons would have called a stellated and camerated fracture), through the basilar process of the occipital, and through the petrous portion of the *right* temporal bone. The skull was thus almost completely girdled by the fracture, an uninjured portion of about three inches in extent only serving to unite the anterior and posterior segments.

There was a large coagulum on the upper surface of the brain, in the cavity of the arachnoid on the *right* side, blood being also effused in less amount in the *left* arachnoid and in the meshes of the pia mater. The brain was slightly contused and lacerated at its base, chiefly on the right side, but otherwise seemed to be uninjured.

The points of special interest in this case are (1) the unusual *extent* of the line of fracture, (2) its *position* (confirming the observations of Aran and Hewett, that fracture of the base of the skull from indirect violence is invariably accompanied by a fissure of the corresponding portion of the vault), (3) the fact of the chief cerebral lesion being on the side opposite to that on which the skull had principally suffered, thus illustrating the paradoxical truth that, other things being equal, the extent of the visceral is inversely proportional to that of the parietal lesion, and (4) the existence of the large clot on the right side, the injury having chiefly affected the *left;* this was evidently owing to there being a communication between the left subarachnoid space and the gaping fissure of the corresponding parietal bone, thus allowing the outward passage of the blood effused on that side, while on the right side it was confined to the part at which extravasation originally occurred.

Dr. H. Allen, in the course of a verbal communication, invited attention to what he believed to be the correct interpretation of the *aphonia resulting from pressure on the recurrent laryngeal nerve.* Dr. Morell Mackenzie, in his paper on Nervo-Muscular Affections of the Larynx (*Lond. Hosp. Rep.*, 1867, p. 117), states that it is due to paralysis of the posterior thyro-arytenoid muscle (abductor of vocal cord), since the laryngeal image in cases in which such aphonia was symptomatic of pressure exhibited central fixture of the cord. Assuming that the accepted statement that the recurrent laryngeal supplies all the intrinsic laryngeal muscles, is the correct one, it is difficult to understand why pressure on its trunk should affect but one of its branches. Dr. A. thought that the true explanation lay in the fact that all the intrinsic muscles were paralyzed by such pressure, and that the central fixture of the cord was caused by the passive inclination of the arytenoid cartilage toward the median line, aided by the inspiratory effort, the vocal cord being at the same time made tense by the contraction of the crico-thyroid muscle.

Dr. S. W. Gross presented an *enormous enchondroma of the tenth rib*, removed by Prof. S. D. Gross from a robust man aged 30. The tumor was seven years in attaining its growth. It extended from the lower left dorsal region two inches external to the spinal column, obliquely downwards and forwards to one inch above the crest of the ileum, and two inches posterior to its anterior superior spinous process. It was broadly oval, with the narrower end below, and measured twelve inches in its long diameter by nine in its transverse. The integuments were not adherent, and the subcutaneous veins were slightly enlarged at its lower limits. It was painless, and the man's health generally good. The operation was performed at his urgent request. He died on the twelfth day after the operation, apparently of left pleuro-pneumonia.

Post-mortem inspection, twelve hours subsequently, revealed the left lung pushed high up into the chest by the diaphragm, which was on a level with the third intercostal space, apparently from distention of the stomach, and compressed against the anterior thoracic walls by accumulation of fluid behind it. There was circumscribed pneumonia of the lower lobe, and the pleural sac contained about a quart of straw-colored serum with large flakes of lymph. The pleura covering the posterior surface of the lung and chest-wall was much thickened and adherent through recent inflammatory effusion. The tenth rib, from its angle almost to its costal attachment, was found to have been the seat of the tumor, and the remaining extremities had a coarsely granular feel. The pleura, which corresponded with the former site of the mass, was uninjured and covered with granulations.

In microscopic characters there was much diversity; but the great mass of the tumor was composed of cartilage tissue. Numerous sections of the lower or more recent portion and of the lobules showed pale, largely-nucleated cells, the general conformation of which was round and ovoid, a few being acuminated, a few stellate, and some were in the stage of proliferation. The majority contained oil-drops, and their nuclei were mostly very granular. A few of the sections exhibited a structureless matrix, but the intercellular substance consisted for the most part of moderately coarse, wavy fibrous tissue, between the fibres of which many spindle-cells were distinguishable. The lowermost limits of the tumor, in which rapid growth had recently occurred, bore the greatest similarity to sarcoma tissue. At some points, the fibrous tissue formed areolæ, in which were imbedded patches of hyaline cartilage. In those portions which were undergoing degenerative changes the cells were globular and packed with drops of oil. The stroma in which they lay was completely fibrous, and infiltrated with minute, highly-refracting, fatty granules and drops of oil, which now and then completely obscured it. The fluid contents of the cysts contained transformed cartilage-cells. The islets of cartilage were rich in cell-elements, and the spicules of bone had well-marked lacunal cells, with canaliculi, but there were no Haversian canals. Other nodules, of apparent spongy bone, were composed merely of amorphous calcareous matter, which disappeared on the addition of muriatic acid, when cartilage-cells, with large nuclei, were developed. The upper or older portion of the growth was made up of smaller cartilage-cells, contained in a sparse but coarse, straight and wavy fibrous matrix, in which spindle-cells were definable. Both cells and matrix were undergoing fatty metamorphosis.

BIOLOGICAL AND MICROSCOPICAL SECTION, ACADEMY OF NATURAL SCIENCES.

At a stated meeting, held April 3, 1871, the Director, S. W. Mitchell, M.D., in the chair,

A donation was received from the Surgeon-General's office, of Col. J. J. Woodward's interesting report, entitled "A Memorandum of the Test Podura," with five photo-micrographs.

Dr. James Tyson exhibited slides of the deposit from two specimens of urine from a case of so-called *intermittent hæmaturia*, which were interesting, if not important, from the fact that the first specimen, though containing granular casts, did not contain blood-corpuscles, and that the second, between the discharge of which and the first, the urine had become quite clear, contained, in addition to granular casts, blood-corpuscles and blood-casts. The importance of this observation lies in the circumstance that in the cases of intermittent hæmaturia reported by Harley (*Medico-Chirurgical Transactions*, vol. xlviii., 1865) blood-corpuscles were exceedingly rare, being found in a single case, and not more than one or two in the field of the microscope. So rarely, indeed, have corpuscles been present, that Dr. Beale in the first volume of *The Practitioner*, Aug. 1868, says, "It is therefore improbable that in these cases there is any hemorrhage as in acute inflamma-

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tion of the kidney, and they ought not to be spoken of as cases of hæmaturia."

In the present case all the other phenomena of intermittent hæmaturia attend, and in the second specimen of urine there were many free blood-corpuscles and blood-casts, while in the first the most careful searching detected none.

The treatment found most useful in intermittent hæmaturia, that by anti-periodic doses of quinine preceded by a purgative dose of calomel, has here also been the most satisfactory, there being no recurrence since its adoption, although four weeks have elapsed, while other modes of treatment, adopted since October, 1870, when the affection first appeared, have signally failed.

Dr. J. G. Richardson exhibited a slide charged with pulmonary elastic tissue from the boiled sputa of a phthisical patient in the Episcopal Hospital, and called the attention of the Section to two characteristics of its elastic fibres: first, the delta (Δ) rather than simple Y shape, frequent among the fragments, which he attributed to the greater resistance, at the meeting-point of the walls of the air-vesicles, to any disintegrating process; and second, the transverse fracture of its component elastic filaments, resembling that of an India-rubber thread, instead of a frayed-out appearance similar to that presented at the extremity of a broken cotton or linen string.

By these peculiarities pulmonary elastic tissue can generally be distinguished from folds in the walls of boiled starch-corpuscles; from mycelial threads of fungi (which, when dichotomous, often have stem and branches of nearly the same size); and from vegetable fibres, which seldom break transversely, and which, when split, take on the Y, and not the Delta shape, as a rule.

REVIEWS AND BOOK NOTICES.

Blood-Letting as a Therapeutic Resource in Obstetric Medicine. By Fordyce Barker, M.D. Pamphlet, 8vo, pp. 14. Reprinted from *New York Medical Journal* for January, 1871. D. Appleton & Co., 1871.

As in the individual the true character, which underlies and models the outward manifestation of action, will often be betrayed by a gesture or an unconscious expression, so too the habits of thought, the manners, the morals, of a century or an epoch may be, and oftentimes are, better illustrated by an anecdote or a homely phrase than by the most scientific analysis of the historian or philosopher. It is to the quaint recitals of Pepys, the elaborate details of Evelyn, and the sparkling satire of Addison and Steele that we trace our liveliest and most vivid impressions of those bygone days. Instinctively recognizing this truth, Dr. Barker has happily utilized an incident which to most men would have seemed "a trifle light as air," but which when seen by eyes which looked deeper than the surface, was found to embody a scientific principle, a living belief, acting upon and influencing men in their daily life, in the truth or falsity of which they are most profoundly interested.

It seems that on his return to New York, after his summer vacation, Dr. Barker found it necessary, for reasons which are not given, to take blood from the arm of a patient in the sixth month of pregnancy. Not having a lancet in his pocket, he went to a large surgical instrument maker on Broadway, and asked for one, when, to his surprise, he was told that there was not a thumb-lancet in the shop!

Is venesection, then, to be regarded entirely as a relic of the past? Is that day inevitably to come when the pocket-lancet will arouse the same feeling of curiosity in the minds of future physicians, which the corroded instruments exhumed from long-buried Pompeii excite to-day in us? Or is it that the reaction against the indiscriminate use of depletion has reached its culminating point, and that we are now to retrace our steps, and with calmer heads, free from the heat of dispute, restore it to the place which it deserves in the hierarchy of remedies? May we not, in the history of the fluctuations of scientific opinion with regard to the value of version as an operation in obstetric surgery, find an apt illustration of this unfortunate—one might almost say inevitable—tendency of the human mind, and, stimulated by the success which has attended a thorough investigation of this question by means of the more vigorous inductive methods of thought, now demanded in all scientific inquiries, venture again to weigh the arguments for and against venesection?

Such was the problem which suggested itself to Dr. Barker; and this little brochure is to be regarded as the expression of his views, founded on clinical observation. The discussion which followed its reading before the New York County Medical Society, was exceedingly animated, and we learn with a sad pleasure that almost on the day of his death the late Professor Elliot had transmitted to the editor of the *New York Medical Journal* a paper on this subject, embodying the results of his extensive experience.

In a few paragraphs, Dr. Barker reviews the testimony of the older obstetric writers with regard to venesection in pregnancy, parturition, and childbed. Their voices give forth no uncertain note. Never did the early Fathers enunciate any tenet of the Church more absolutely, than did these writers the dogma of plethora during pregnancy. The indications for the abstraction of blood were so various, and so rigidly enforced, that but few women could have escaped the lancet during one of the above periods.

When, chiefly owing to the labors of Cazeaux, the doctrine of true plethora in the pregnant woman was replaced by the theory, since confirmed by nearly all careful observers, that the condition was really one of impoverishment of the blood, of hydræmia so called, the arguments by which venesection was sustained were weakened, and the practice gradually fell into disuse; the more readily because this view coincided with that which was gaining ground in all departments of medicine. So complete has been the reaction that some writers of the present day, representatives of distinguished schools, affirm that they know of no condition which can justify the abstraction of blood from the arm of a pregnant female. While Dr. Barker in general accepts the views of Cazeaux as regards the condition of the blood in pregnancy, he thinks that real plethora may at times, though rarely, exist, and, indeed, may give rise to such serious symptoms of congestion that the continuance of pregnancy, nay, possibly, the life of the woman, will be jeopardized. In such cases, the abstraction of a few ounces of blood may be the means of saving both mother and child.

The interesting question of eclampsia is then discussed; and, as it is in cases of this nature that the question of venesection most often presents itself for decision, we propose to consider this topic somewhat in detail. In advance, we would call attention to the number of conditions which are grouped together under this title, which is in danger of degenerating into a term as vague and inexpressive as "*dropsy*." We must distinguish as clearly as science will at present admit. 1st. Hysterical convulsions, which often simulate in a most perplexing manner eclampsia. 2d. Epileptic convulsions occurring during pregnancy or parturition. 3d. Those caused by meningeal inflammation, or having their origin in the presence of an apoplectic clot. 4th. Reflex convulsions dependent upon some eccentric irritation. 5th. True uræmic convulsions caused by an advanced stage of Bright's disease, when pregnancy is to be regarded simply as a concomitant, an accident. Lastly, true eclamptic convulsions; and this brings us to the discussion of some of the prominent points in the pathology of the disease.

A glance at the preceding section will show that we do not hesitate to adopt the opinion of those who maintain that the theory of uræmic poisoning is not applicable to all, or even most, of the cases of eclampsia. That the accumulation in the blood of urea, or its derivative, carbonate of ammonia, may produce convulsions closely resembling eclampsia, we cannot fail to admit, after carefully studying the experiments of Spiegelberg (an abstract of which appeared in this journal, vol. i., No. 8); but, in point of fact, what is the post-mortem evidence as regards the condition of the kidneys? In more than one-third* of the cases there is no disease; in many of the others, when these organs are affected, we find simple hyperæmia, "cloudy swelling," or fatty degeneration of the

* Winkel, Die Pathologie und Therapie des Wochenbetts, p. 442.

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cells. In only one third of the cases, where any change of structure is visible, do we discover diffuse interstitial nephritis, the third stage of Bright's disease; or, in other words, in this small proportion of cases alone do we recognize that pathological state which we would expect, arguing from the analogy of Bright's disease occurring in the non-pregnant female. One source of fallacy lies in the assumption that the occurrence of albumen in the urine proves the existence of Bright's disease, while in point of fact it may have its origin in simple hyperæmia of the kidneys, and is indeed sometimes found in the course of a normal pregnancy and childbed. In a small proportion of cases of eclampsia (1.5 per cent.) albumen is not found in the urine, and often is not present *before* the convulsions, but succeeds them, being caused by them.

Failing, then, to accept this theory of uræmia as a *constant* cause of eclampsia, what other mode of explanation is left to us? Let us again turn to the post-mortem table for evidence, and we find that in only two or three per cent. of all the cases the brain was found in a normal state; in by far the larger number it was anæmic and œdematous to such an extent that the convolutions were more or less effaced. In about one-sixth of the cases it was hyperæmic, with apoplectic clots varying in size from a millet-seed to a hen's egg. So far the post-mortem evidence. Let us now avail ourselves of the careful experiments of Frank and Munk, who produced artificially this state of hydræmia, with subsequent œdema and anæmia of the brain, by tying the ureters and jugular veins in animals, and then injecting water into the carotid artery: twitchings of the muscles succeeded, followed by the most violent convulsions and coma, the post-mortem examination revealing anæmia and œdema of the brain. Other experimenters have in various ways confirmed these observations, and the deductions made from them by Frank, viz., that hydræmia, associated as it is with an increased tension of the arterial system, leads to primary hyperæmia, œdema, and secondary anæmia of the brain, and that *many* cases of puerperal eclampsia find in this sequence their explanation. "These clinical facts also," writes Winkel, "corroborate this view, viz., that eclampsia is especially frequent in pregnant women when the evidences of hydræmia are most marked, that is, in persons who are œdematous, and whose urine contains albumen (caused by the congestion of the kidneys); 2d, Eclampsia occurs far more frequently in primiparæ than in multiparæ, and is especially common in cases of tedious labor and in twin pregnancies; 3d, The outbreak of convulsions usually takes place during the violent efforts of parturition, or within the ensuing twelve hours." In all of these cases the tension of the arterial system is increased, and œdema can the more readily follow, owing to the watery condition of the blood. That all cases of eclampsia are explained by this theory, which is most warmly advocated by Frank, Munk, and Rosenstein, is not maintained; but that many cases which are utterly inexplicable under the arbitrary assumption of uræmia will in this manner find a clear and simple elucidation, will, I think, be admitted.

If this theory be true, the value of venesection must also be allowed. In the lancet we have a means by which we can remove this arterial tension and avert the dangers which accompany the act of parturition. In its use we do but follow the lead of nature, for we find that the convulsions generally cease after the labor is completed and a natural venesection has resulted from the loss of blood attendant upon the process. Could we accurately measure the danger of the moment, we might sometimes be justified in awaiting this cure of nature, merely expediting delivery; and such cases do occur; but experience tells us that too often the convulsions may be fatal in themselves, or produce pathological conditions which result in death; for the danger lies not alone in the cerebral disturbance, but also in the congestion of the pulmonic system.

An experience of two winters in the wards of the Vienna Lying-in Hospital, where venesection is never resorted to, convinced me that in most fatal cases œdema pulmonum was the *immediate* cause of death: so that venesection in these cases must be regarded as an "indicatio vitalis." Clinical experience, too, justifies our active interference, if we can credit the statements of a host of writers; and in this connection Dr. B. W. Richardson's testimony will recall many similar cases to any one who has had a large obstetric experience: "In two cases," he writes, "I have bled from the arm, and have seen entire consciousness from the profoundest coma appear while the blood was flowing." Dr. Bennett, who, as is known, is no advocate for blood-letting, coincides with and supports this view.

A few other indications are brought forward by Dr. Barker; but the wide circulation this paper will receive from its publication in the *New York Medical Journal* justifies us in referring those who are interested in this question to the original article; and what obstetrician or—we need not use a restricted phrase—general practitioner is not? The thanks of the profession are due to Dr. Barker for calling attention once more to a remedy powerful for good or evil, but which, when judiciously employed, yields to no other, as Dr. Richardson writes, "in producing effects patent to the eye and convincing to the reason."

BOOKS AND PAMPHLETS RECEIVED.

Hair as a Suture and Ligature. By John T. Darby, M.D. Pamphlet, pp. 20. Extracted from the *Richmond and Louisville Medical Journal* for Sept. 1870.

The Causation, Course, and Treatment of Reflex Insanity in Women. By Horatio Robinson Storer, M.D., LL.B., etc. 12mo, pp. 236. Boston, Lee & Shepard, 1871.

Report of a Special Committee of the Medical Society of the District of Columbia upon the Claims of Homœopathic and other Irregular Practitioners for Professional Recognition in the Medical Service of the United States Government, and the Charges brought by the Homœopaths against the United States Commissioner of Army and Navy Pensions. Pamphlet, pp. 8.

Seventh Annual Report of the Board of State Charities of Massachusetts, to which are added the Reports of its Several Officers. 8vo, pp. cxiv., 468. Boston, 1871.

The Philadelphia Medical Register and Directory. Edited by John H. Packard, M.D., etc. 16mo, pp. 330. Philadelphia, Collins, Printer, 1871.

Chemistry, General, Medical, and Pharmaceutical, including the Chemistry of the U.S. Pharmacopœia. A Manual on the General Principles of the Science; and their Applications to Medicine and Pharmacy. By John Attfield, Ph.D., F.C.S., etc. From the Second and Enlarged English Edition, revised by the Author. 12mo, pp. xi., 552. Philadelphia, Henry C. Lea, 1871.

GLEANINGS FROM OUR EXCHANGES.

CILIARY MOVEMENT.—In *The Academy*, No. 18, for February 15, we find an abstract of Prof. Ernst Haeckel's account of this subject, with his own observations, as contained in his most recent work, *Biologische Studien*. The most recent investigations—those of Dr. W. Engelmann (*Jenaische Zeitschrift*, 1868, vol. iv. p. 321), as also the earlier ones of Dr. M. Roth (*Virchow's Archiv.*, Bd. 37, p. 184)—have shown that, physiologically, the ciliary movement is much more nearly related to the amœboid than to the muscular. Prof. H.'s own observations show that the ciliary is a mere modification of the amœboid movement of protoplasm. Ciliated cells are of two kinds. In the one (epithelium flagellatum) each cell is provided with a single long flagellum or lash,—sponges possess only this kind; in the other (epithelium ciliatum), numerous hair-like appendages take the place of the flagellum. This is the kind found in most higher animals. The old notion that the cilia are attached to the outside of the cell-membrane must now be set aside, since probably most ciliated cells are destitute of a membrane, and the appendages, whether flagella or cilia, are direct processes of the protoplasm. Prof. H.'s observations on lower organisms during the past year have led him to conclude that ciliated cells arise directly by the transmutation of amœboid cells. This he has observed in the case of the motus flagellaris, in Monera, such

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as Protomyxa anurantica and Protomonas Huxleyi. The swarm spores of these species, when they leave the parent cyst, are pear-shaped, with a single long, hair-like flagellum, by the lashing movement of which they swim about. After a time they settle, whereupon the flagellum becomes an amœboid process. These are merely cytods; but the same phenomenon has been observed in the case of swarm spores with a nucleus,—*i.e.* real cells,—and described by De Bary in his monograph of the Mynomycetæ. The same thing was seen by Haeckel (at Bergen, Norway, in August and September, 1869) in the epithelial cells of the sponges of the order Leucosellaria. The most interesting observations of the Professor were, however, made in the Canary island Lanzarote. Here he observed the direct origin of the motus ciliaris from amœboid protoplasmic movement, first, in the spherical masses arising from the division of the egg in the Siphonophera; second, in a new and remarkable form which he has discovered, which he calls Magosphæra planula, and considers as representing a new and separate group of the kingdom Protistæ. This creature has a ball-like body, consisting of pear-shaped cells, bedecked with many cilia. These cells can be seen not only to develop out of amœboid cells, but subsequently to reassume that condition. For after the ciliated ball has swum about for some time, its component ciliated cells separate and gradually pass into an amœba form. These observations of Prof. Haeckel's are important not only physiologically, but also as of classificatory (*sic*) value, as showing that the possession of cilia, as opposed to the exhibition of amœboid movement, must no longer be considered as a ground for placing the infusoria in a separate group.

Mucous Disease.—In a paper read before the British Medical Association (*British Medical Journal*, February 11 and 18), Mr. Whitehead, of Manchester, calls attention to a disease which, notwithstanding that it has received various names, has been very imperfectly described. Its principal characteristic is the production of mucus, either in an abnormal condition or in an excessive quantity, on most, if not all, mucous surfaces. While any mucous membrane may be affected, that of the bowel appears to be so most frequently; and mucus is discharged with the stools, either—1, as masses of more or less inspissated mucus having the appearance of colloma or jelly, or—2, as tubular casts of the gut, which are veritable cylindrical sheaths, and also as membranous shreds and flakes of various forms, which can be shown to be nothing more than fragments of the tubes in various stages of development, or—3, as membranous shreds of lymph, mixed with blood and pus. This form contains albumen and fibrin in abundance,—the latter a fibrillated form. The tissue of these membranes consists of an elastic, transparent, and structureless matrix, in which are imbedded great numbers of spherical and cylindrical cells, the débris of these cells, free nuclei, crystals of ammonio-phosphate of magnesia, and particles of undigested food. They are voided in lengths varying from a few inches to four feet. They may be one-twentieth to one-sixteenth of an inch in thickness.

This hypersecretion of mucus is independent of inflammation, and indicates a want of balance between nerve-force and germinal matter, and tends, of course, to prevent the healthy performance of the functions of the part. It is excited by numerous causes, and may occur at any time of life, but it is said that middle-aged persons, children, and old persons are liable to it in the order in which they are enumerated. It is more frequent in women than men, and is especially prevalent in damp climates. It may be produced by constipation, and is not unfrequently induced by the use of drastic purges. The following is the account given of the symptoms.

The invasion and early progress of this disease are most insidious. The skin is dull and sodden or swarthy-looking, or else it is of an artificial, waxy clearness. It is often clammy or greasy, and acts but imperfectly. Eruptions of various descriptions are far from uncommon, and would appear at times to be vicarious of the internal mucous phenomena. The lips and gums are generally pale; the tongue is moist, pale, and flabby, often swollen and indented by the teeth, sometimes red and irritable. The mucous coating of the tongue often peels off in patches, leaving the surface underneath raw and tender. Small ulcers are frequently met with on the tongue, and also on the insides of the lips, cheeks, and gums, and even on the fauces, pharynx, and posterior nares. When these latter localities are implicated in this manner, violent headaches are always experienced. The pulse is weaker and slower than natural. The patient's subjective complaints are legion. The action of the bowels is rarely normal; they are almost always constipated, but diarrhœa may sometimes alternate with constipation. With regard to the formation, exfoliation, and discharge of these mucous structures, it would appear that in each case they observe a regular periodicity,—that the exfoliation is critical, and is always followed by an immediate amelioration of the symptoms, which intensify up to that event. The patient is usually conscious of the formation of each fresh crop, and describes it as a gathering in some part of the abdomen,—generally the lower part of either lumbar region. At other times, the feeling is only one of heat and rawness.

In the treatment of the disease, drastic purgatives are to be avoided. Alkaline enemata may be employed to remove the accumulation of mucus, and its reformation may be prevented by injections of nitrate of silver. To allay nervous irritation and reinvigorate the strength, bromide of potassium, in increasing doses, and the mistura ferri composita, may be given. The skin is to be kept in good condition. The diet is to be regulated and restricted, it being a great mistake to suppose that a large amount of strengthening food is required by the patient. Liquid food, excepting milk, aggravates, in the majority of cases, every symptom; sugar is invariably hurtful; tea, coffee, and alcohol,—Burgundy being the only wine from which benefit has ever been derived,—vegetables, and fruit, also, prove injurious.

In the same journal for March 11, Dr. George Hunter says that of the four cases of this disease that he had seen, three occurred in patients with a movable kidney.

MISCELLANY.

The Surgeon-General of the Navy, in accordance with Article VI. of its by-laws, has appointed Surgeons Philip Lansdale, John M. Browne, John Y. Taylor, and David Kindleberger delegates from the naval medical staff to the American Medical Association which meets May 2 in San Francisco.

Rumor says that the Secretary of the Navy, whose authority in the matter is not recognized by the Association, has accredited Surgeon N. Pinkney also as a representative of the medical staff of the Navy.

The State Insane Asylum.—Drs. John L. Atlee, of Lancaster, and Traill Green, of Northampton, with Mr. D. W. Gross, of Lancaster, have been duly appointed Trustees of the State Insane Asylum at Harrisburg.

Anæsthesia Again.—Our readers are probably aware that a "Morton Testimonial Fund" is in process of raising, under the auspices of a number of the medical profession in Boston, who are persuaded that the honor of the discovery of anæsthesia is due to their late townsman, Dr. W. T. G. Morton.

On the other hand, a monument is projected in Hartford, Connecticut, to the memory of Dr. Horace Wells, of that place, who, it is claimed, was the real inventor of the use of ether to allay the pain of surgical operations.

Mütter Lectureship.—Dr. J. Solis Cohen has been appointed by the College of Physicians of Philadelphia to deliver the next course of lectures under the provisions of the Mütter bequest. The subject will be "Surgical Affections of the Air-Passages;" the time of the delivery of the course has not yet been fixed.

Removals.—Dr. Frederick W. Lewis has removed to No. 1433 Poplar St.; Dr. Louis A. Duhring, to No. 127 South Eighteenth St.

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PROF. OPPOLZER'S CLINIQUE.—"The opening scene of Prof. Oppolzer's ward in the Vienna University reminds one of a raid of Prussian Uhlans, two hundred and fifty strong, each putting forth his energy and strength to gain a foothold within hearing-distance of the teacher. The outdoor students that throng his ward every morning are a motley group of all nations; but the most numerous and peculiar of all are the Polish Jews. Among the fraternity, with their two flowing curls, one pendent before either ear, with their velvet skull-caps, and their black coats almost trailing, one not unfrequently finds a brother from Jerusalem, from Turkey, or even from Arabia. Precisely at nine in winter and seven in summer, Prof. Oppolzer's slight, tall, and somewhat bent form is seen entering the hospital, his step a little tottering and feeble. The most important case presented becomes the theme of the morning lecture, and instead of one hour he frequently stays three."

MEMORIALS TO THE LATE SIR JAMES Y. SIMPSON.—It seems likely that these memorials will be the erection of a marble bust in Westminster Abbey, and of a monument and statue in Edinburgh, together with the institution of a hospital for the diseases of women in the last-named city. Similar hospitals will be established in London and Dublin also, if the funds can be obtained.

CONSUMPTION OF CHLORAL.—From the *New York Medical Journal* we learn that ten tons of chloral were imported, it is said, into England from Germany during the past year. The price, at first, was £5 a pound; it is now selling at less than five shillings a pound. There being no duty on alcohol in Germany, the materials required for the manufacture of chloral being only alcohol and chlorine, there can be no competition with the manufacture there.

COMPENSATION IN RAILWAY ACCIDENTS.—It is stated in the *British Medical Journal* of March 11 that "in an important railway case tried lately, the Lord Chief Justice said that he was in the habit of suggesting, in actions on account of railway accidents where there was a conflict of opinion between the medical men as to the period of the sufferer's recovery, that a maximum sum should be given on the worst view of the case, to be reduced *pro rata* after an examination by a medical man at the end of the period named for probable recovery, if the patient were in a better state of health; but that if he remained in the same state, then the damages should stand. The suggestion was adopted."

RADICAL CURE FOR COLIC.—We cannot forbear reproducing the following gem, which has been going the rounds for some time, for the benefit of our readers:

"Dr. B. R. Westfall, of Macomb, Ill., had a patient, a Mrs. H., living eight miles from Macomb, who had been for several years previous to September, 1867, subject to terrible attacks of bilious colic. On account of the distance and their severity, the doctor had taught her to treat them herself; but on September 17, 1867, being suddenly summoned, and thinking to relieve rather than save her," (!!) "he made an incision and cut out about five and a half inches of intestine, and brought the cut ends in contact so that they grew together. The wound healed in about four months, and her recovery was perfect. Her health is now good; she does the housework for a large family, and has never had another attack of colic."

Some trifling particulars are wanting in this account, such as the place and extent of incision, and the ground for removal of a portion of intestine. As it stands, it seems as if "heroic" practice" were scarcely a strong enough term for this surgical feat.

THE FEMALE MEDICAL STUDENTS IN EDINBURGH.—The prize list of the Edinburgh extra-academical school for the session recently ended has a novel character in the presence of the names of several ladies among those of the successful competitors. In Dr. Handyside's class of Anatomy, the names of Matilda C. Chaplin, Mary Edith Pechy, and Helen Evans appear as recipients of four out of fourteen certificates of merit; and in Dr. Watson's junior class of Surgery, Isabel Thorne and Matilda C. Chaplin are noted as having gained prizes.

RETIREMENT OF MR. COCK.—After a long and faithful performance of duties at Guy's Hospital, Mr. Edward Cock retires from his office of Senior Surgeon. It is intended by his old pupils and friends to present him with a testimonial on the occasion of his retirement.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	Apr. 8.	Apr. 15.	Apr. 22.
Consumption	62	53	48
Other Diseases of Respiratory Organs	31	36	33
Diseases of Brain and Nervous System	54	48	41
Debility	13	17	10
Marasmus	12	3	14
Old Age	9	14	19
Diseases of Abdominal Organs	27	33	21
Zymotic Diseases	23	24	21
Diseases of Organs of Circulation	13	15	17
Cancer	6	6	1
Scrofula	2	1	2
Syphilis	1	1	0
Stillborn	18	12	10
Casualties	4	4	12
Murder	1	0	0
Suicide	1	0	0
Intemperance	0	0	5
Unclassifiable	11	8	11
Unknown	2	2	3
Totals	290	277	268
Adults	147	165	161
Minors	143	112	107

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 5, 1871, TO APRIL 18, 1871, INCLUSIVE.

RANDOLPH, JOHN F., SURGEON.—By S. O. 136, War Department, A.G.O., April 5, 1871, in addition to his present duty as Attending-Surgeon at New Orleans, La., to assume the duties of Acting Assistant Medical Purveyor and Medical Storekeeper.

CLEMENTS, B. A., SURGEON.—By S. O. 62, Headquarters Department of Texas, March 30, 1871, the telegraphic instructions of 21st inst., granting him *thirty days'* leave of absence, with permission to leave the limits of the Department, are confirmed.

DAVIS, P. C., SURGEON.—By S. O. 71, Headquarters Department of Dakota, April 6, 1871, relieved at Fort Benton, Montana Territory, to accompany battalion of Seventh Infantry from that post to Fort Shaw, Montana Territory, and, on arrival, report for duty as Post-Surgeon.

BROOKE, JOHN, ASSISTANT-SURGEON.—By S. O. 73, c. s., Department of the East, on being relieved by Assistant-Surgeon Lippincott, to comply with S. O. 109, c. s., from A. G. O., transferring him to the Department of the Columbia.

LIPPINCOTT, H., ASSISTANT-SURGEON.—By S. O. 73, Headquarters Department of the East, April 11, 1871, assigned to duty as Post-Surgeon at Raleigh, N.C.

CHERBONNIER, A. V., MEDICAL STOREKEEPER.—By S. O. 136, c.s., A. G. O., as soon as the Medical Purveying Depot at Santa Fé, N.M., is closed, to repair to Washington, D.C., and report to the Surgeon-General for orders.

O'DONNOGHUE, F., MEDICAL STOREKEEPER.—By S. O. 136, c.s., A.G.O., relieved at New Orleans, La., and to report in person to Lieutenant-Colonel Charles Sutherland, Acting Chief Medical Purveyor, New York City, relieving Capt. George Wright as Medical Storekeeper.

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MONDAY, MAY 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TWO CASES OF FACIAL PARALYSIS,—ONE WITH PARALYSIS OF THE UPPER LEFT SYMPATHETIC NERVES.

BY H. C. WOOD, JR., M.D.,

One of the Attending Physicians to the Philadelphia Hospital.

GENTLEMEN:—It is well known that one of the nerves most apt to be affected with motor paralysis is the facial, or portio dura of the seventh pair, and, as was pointed out by Sir Charles Bell, this paralysis is of two forms,—one of which is centric, the other truncal, in its origin. I offer for your inspection to-day two cases of facial paralysis, illustrating both these varieties.

Case I.—Ann D., married, aged about 35. Symptoms, paralysis of left leg and arm, very nearly complete, with contraction of the muscles. Corner of the mouth drawn very slightly to the right side,—on smiling, very markedly so. She is not troubled by food collecting between her cheek and teeth. The left eye closes readily. The forehead wrinkles when she frowns. The pupil is natural.

Case II.—Joseph Eberle, æt. 57, Germany, widower, temperate, ropemaker, admitted November 29, 1870.

History.—In November, 1869, was taken with cough; since that time has lost much flesh. Has spit no blood.

Present Condition.—Right apex anteriorly, respiration rude; expiration prolonged; same posteriorly. Left apex, fine moist râles resembling crackling, but somewhat softer than usual. Percussion dull under left clavicle. Left apex posteriorly, no crackling. Sputum nummular, brown, and yellow. Strength is progressively failing.

January 13, 1871.—Sputum very much lessened. Troubled with dry cough at night.

February 4.—Five days ago, on waking in the morning, found he was paralyzed in the left side of the face. Puffiness in cheek was noticed on morning of above discovery. Has had an otorrheic discharge from left ear for six months.

Present condition.—Mouth drawn moderately to right side. Left side immovable when he laughs. Food collects in left cheek when eating. Perfect paralysis of left "*orbicularis oculi.*" No ptosis. Left pupil immovable, very much contracted. Forehead does not wrinkle when he frowns. No paralysis of muscles of mastication.

Some impairment of vision. Vessels of eye injected. Total loss of galvanic motor contractility in left side of face. Hearing abolished in left ear. Complains of shooting pain in left eye. No impairment in facial sensibility. When asleep, the left eye rolls up in his head. No anæsthesia of eyebrow or face. Some twitching of flexors.

It is, of course, often of the utmost importance to distinguish whether a case of facial paralysis be centric or truncal; and, fortunately, there are two reliable diagnostic signs or symptoms. When the paralysis is trunkal, according to Prof. Romberg, its completeness distinguishes it. The smooth forehead, the paralyzed orbicularis oculi, with the wide-open, staring, injected eye, the flabby pendent cheek, and the absolutely motionless corner of the mouth, are all seen in our Case II., but are absent in Case I., which is evidently centric, as part of a general right corpus striatum paralysis.

Again, it is well known that when muscles are paralyzed from disease of the nerve-centres, their galvano-contractility remains for a very long time perfect, or nearly so; whereas, when the nerve-trunk is paralyzed, the galvano-contractility soon becomes totally extinct. This loss of contractility is not, it is true, instantaneous, but gradual; yet it takes place so rapidly that by the sixth or seventh day the muscles have lost the power of responding to a galvanic current. I am now applying the galvanic test, and you see how in the one case (No. 1) the facial muscles, under the influence of a faradaic current, contract equally on both sides, whilst, in the other, on the affected side the strongest current only causes pain.

For the reasons just given, then, our diagnosis is so far made out in Case II. as Bell's or truncal paralysis of the facial nerves.

There are three chief forms of this disease, differing essentially in their cause and prognosis. The first includes such cases as come on suddenly after exposure to cold. Aroused by an alarm of fire, a man jumps suddenly out of bed, rushes to the window, opens it, and allows the cold north wind to chill him. The next morning he finds his face drawn. Or the same thing occurs after a long walk facing a cold wind. The second set of cases are those in which the paralysis is owing to pressure on the nerve from disease of the temporal bone. The third set are those where the nerve has been cut across, as during a surgical operation, or by a sabre-stroke.

The history of the case before us shows that it does not belong to the first or the last of these classes. The paralysis came on as the man was lying in bed in the warm ward, and there has been no wound of any kind. There is, however, a free purulent discharge from the ear, which is of long standing, and, taken with the evidently scrofulous diathesis of the patient, points to disease of the mastoid process of the temporal bone.

There is one symptom in the case to which I would call your especial attention,—namely, the pupil of the affected side is firmly contracted, and is immovable, or nearly so. I need not tell you that this is not directly connected with the facial paralysis, but must be owing to a lesion of some other nerve. There are three nerves which send filaments to the pupil,—namely, the oculo-motor, the trigeminus, and the upper branches of the first cervical sympathetic ganglion. Of these the oculo-motor supplies the circular fibres of the iris. When this nerve is irritated in the rabbit, dog, or cat, these fibres contract, and the pupil becomes small; when it is cut, they are paralyzed, and the pupil enlarges. The trigeminus and sympathetic nerves send their ultimate filaments to the radiating fibres, and, consequently, if these nerves are cut or paralyzed, contraction of the pupil results. There is still some obscurity hanging around the action of the fifth pair. I myself have cut it only in the rabbit, and in this animal section of the nerve is followed by anæsthesia of the cornea, with immediate marked contraction of the pupil, which, however, is not permanent, but yields after a period varying from six hours to as many days. In the dog and cat, according to both Marshall and Carpenter, division of this nerve is not followed by contraction of the pupil. In the present case the oculo-motor nerve is very plainly not concerned. Only under irritation could it cause contraction of the pupil; and it is hard to conceive how any irritation could be so persistent. Moreover, such irritation interferes with the other functions of the nerve, and there would be spasm or other evidence of deranged innervation in the upper eyelid.

The nerve involved must be either the fifth or the sympathetic.

The trigeminus is, as you all know, the nerve of general sensibility of the face and of motion for the masticatory muscles proper. There is in the present case no loss of facial sensibility, nor is there any paralysis of the muscles of mastication.

If, however, the first or ophthalmic branch of the tri-

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facial were alone involved, it is conceivable that these functions might remain perfect and yet contraction of the pupil be present. There would be in such case, however, anæsthesia of the eyeball and brow, which is not present in the man before us. Moreover, the anatomical relations of the parts are such that there is no conceivable single lesion which could involve the facial nerve and the first branch of the fifth, and leave the main trunk of the latter nerve untouched. It is necessary, then, to exclude the trigeminus and to make the diagnosis that the contraction of the pupil is due to interference with the sympathetic nerve. The branches which go from the first cervical ganglion to the eye follow the vessels and form a plexus around the carotid artery as it passes through the carotid canal in the mastoid process of the temporal bone. Putting, then, these three facts together,—namely, prolonged suppurative discharge from the ear, paralysis both of the portio dura and portio mollis of the seventh pair, and paralysis of the sympathetic nerve,—I think there is sufficient ground for the diagnosis of very extensive disease of the temporal bone, involving the whole mastoid process. Unfortunately, no practical good, so far as treatment is concerned, can come out of this diagnosis, for the man is far advanced in pneumonic phthisis. It is very plain that no treatment can avail anything.

There is one practical point, however, which the diagnosis makes clear,—*i.e.* the prognosis. In order for both the nerves to be involved, it is very evident that the disease of the bone must be most extensive, and that the life of the patient is in imminent peril of being compromised by an extension of the inflammation to the membranes of the brain. Your prognosis in any such case is, therefore, very grave,—much graver than if the facial nerve were alone involved. Even in a man otherwise healthy, such lesions as must exist in this patient's temporal bone would authorize an almost fatal prognosis. At the very best, the life of such a subject must hang as it were upon a thread for months.

The subsequent history of the case fulfilled with unexpected rapidity the prognosis, and the post-mortem entirely corroborated the diagnosis. The following is the report:

February 9, A.M.—Same symptoms, save great increase in twitchings.

Feb. 9, P.M.—Received one-fortieth grain of atropia by hypodermic injection at 7 P.M. Right pupil now fully dilated; left slightly so,—not more than one-half larger than before administration of atropia.

February 10.—This morning discovered total paralysis in right side, more marked in upper extremities than lower. Is unconscious. Vacant stare from eyes. Nervous twitchings more violent.

February 11, A.M.—Unconscious, with wandering delirium. Constant twitchings, more marked on left side. Power of motion on right side returned.

February 13.—Still unconscious. Left side of face resumed its natural shape.

February 14.—Last night about ten o'clock he died.

Autopsy.—Vessels of arachnoid congested. Subarachnoid space, containing serous exudation, with some lymph both at base and vault.

Brain rather soft; everywhere congested, and contains apparently serum. Ventricles filled with serous fluid.

Petrous portion of left temporal bone necrosed, so that its end is destroyed, and above, the carotid canal is completely opened throughout its entire length. The top of the meatus auditorius is converted by necrosis into a sort of sieve; this continues along lower edge of petrous portion almost to carotid canal. The facial nerve is exposed just as it passes around the aqueductus Fallopii. Opening in carotid canal plugged up by a thick, gelatinous, almost cartilaginous exudation.

Lungs with small cavities at apices and advanced "cheesy deposit."

Left femur.—Head and neck, cancellated portions, trabeculæ bluish; upper third, marrow yellowish, very dull carmine and Indian red in color; middle third mostly of a deep dull carmine red, resembling that of coagulated blood; lower third yellowish, interspersed with dull red spots; consistence of marrow fleshy; marrow composed chiefly of free fat and fat cells.

ORIGINAL COMMUNICATIONS.

ON THE PATHOLOGY, DIAGNOSIS, AND PROGNOSIS OF THE DIFFERENT FORMS OF BRIGHT'S DISEASE OF THE KIDNEY.

ILLUSTRATED BY SELECTED CASES.

(Concluded from No. 15.)

BY JAMES TYSON, M.D.,

Clinical Lecturer on Microscopy and Urinary Chemistry in the University of Pennsylvania.

B. CHRONICALLY-CONTRACTED KIDNEY.

SYNONYMS, *granular kidney, red granular kidney, chronic desquamative nephritis, gouty kidney, cirrhotic kidney, interstitial nephritis.*

FOR reasons already stated, we prefer to include the special form of contraction named by Basham the "gouty" kidney, under the general term contracted kidney; and if the word gouty is to be used at all, we would make it, as the late Dr. Todd has done, *synonymous* with contracted kidney, and not a subdivision of this form. Under any circumstances, the significance of the term is lost in this country, through the gradually increasing rarity of gout. In this condition the kidney is small,—often very small (we have seen such a kidney from an adult female scarcely larger than the thumb of the same individual). Here, too, we believe there is sufficient reason to admit *two modes of origin.* Most frequently the chronically-contracted kidney originates idiopathically, but occasionally, at least, it may be the result or continuation of acute inflammatory disease.

Pathological appearances.—Although undoubtedly small at the stage at which it is usually met, some allege that in its early stage the chronically-contracted kidney is congested, and therefore larger than natural. Its surface is rough and the capsule adherent, and when the latter is stripped off, portions of the secreting structure are often removed with it. In color it is sometimes red, and engorged vessels may be traced; hence the term red granular kidney. But it is often also pale in color. On section, it is noted that all portions are wasted, but the cortical or secreting portion much more markedly so. The Malpighian bodies are smaller, less numerous, and can scarcely be detected by the naked eye, while the small arteries are more prominent from thickening of their walls. The increased density and firmness of the organ are apparent. If the conditions occur in a gouty subject, the linear chalk-marks of urate of soda are noted, more particularly in the pyramids of straight tubules, and are contained within as well as between the tubules. Microscopically, four hundred diameters show us wasted and shrunken tubules, in places containing no epithelium; in other situations, the tubules may be tolerably perfect, and there is every gradation between these two conditions. Coexisting with these wasted tubules is a marked increase of the fibrous tissue or so-called stroma lying between them, and surrounding the Malpighian bodies. This so-called stroma, according to Drs. Johnson and Beale, does not exist in the young kidney, but gradually increases as portions of the secreting structure become useless and are converted into the fibrous intertubular substance. It is, however, at no time abundant in the normal condition, according to

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these authors. So in wasting kidney, Dr. Beale asserts that the excess of fibrous tissue is not the result of inflammation of the stroma, as contended for by Virchow, Dickinson, and others, but results from the rapid destruction of the tubular structure. Others, as Hanfield Jones and Grainger Stewart, maintain that "the process may be from the first non-inflammatory, depending upon the exudation of blastema, tending abnormally to fibre-development, and not simply maintaining the nutrition of the part."*

Compelled, as we feel ourselves, as the result of some study of the minute anatomy of the kidney, to admit that the quantity of the connective tissue has been exaggerated, we hesitate to restrict the seat of the active changes resulting in contraction of the organ, to this element; in other words, to admit an interstitial nephritis. On the other hand, we are not satisfied that Dr. Beale has made good the ground he has taken with regard to the nature of cirrhosis of the kidney or liver. Is it not analogous to that pneumonitic process which results in a fibroid change of the proliferating bioplasm, having its origin not altogether nor mainly in the exact situation in which it is found, but in minute particles of germinal matter which have made their way through the blood-vessel walls and are originally derived from the white blood-corpuscles, rather than to that of the second form of pneumonia, which terminates in a cheesy or fatty change of the same original elements of inflammation, and to which the parenchymatous nephritis resulting in fatty degeneration is more closely allied?

More important practically, and not less interesting, are the *clinical history* and *diagnosis* of this form of Bright's disease, which is most insidious in its approach. Perhaps in the habitual drinker, in the gouty bon-vivant, or in a child after the acute Bright's disease of scarlatina, in an adult after acute nephritis from exposure, or in the overtaxed merchant or professional man, or even in those apparently free from any exhausting agency, the changes which constitute this disease may begin to take place. Of the symptoms, great *weakness*, manifested either primarily or in slow convalescence from any disease, is perhaps the first to attract attention, and to lead to an examination of the urine in the search to account for an unexplained condition; for dropsy does not generally present itself, and when it does, it is but slight, often noticeable only in the feet, and towards evening. Again, it passes away and does not recur. Many cases indeed occur in which there are absolutely no symptoms, not even a feeling of weakness, and yet an examination of the urine will show the elements indicative of the disease.

Attention being called to the urine, however, it is found perhaps more copious, of low specific gravity,—rarely above 1010,—and to contain albumen, but in exceedingly small amount; and indeed albumen is often temporarily wanting, as are also the casts presently to be described as characteristic. But although the albumen and casts thus disappear, they never remain permanently absent.

The casts which are characteristic of this form are not numerous. They are hyaline or granular. The hyaline are usually empty, but occasionally a single or perhaps two oil-drops will be seen glistening through the transparent structure of the tube, and a few oil-globules will be also noted floating free in the field. Occasionally, too, a fragment of epithelium is seen occupying a place in the cast.

These conditions, as intimated, may exist for years undetected, and drowsiness, soon followed by coma, may supervene before the disease is suspected. This is, moreover, a form of chronic Bright's disease in which urea is particularly apt to be retained; and death is more apt to occur with coma and convulsions in this than in any other form, except, perhaps, the acute. There may be at the same time attendant cirrhosis of the liver, and occasionally epistaxis also occurs.

This is the affection of the kidney in which we have most commonly structural changes in the *retina*, accompanied by defective vision. In addition to the sudden blindness which may occur in uræmia, and which generally passes away as quickly as it came, we have the gradual impairment of vision from retinitis. The first effect of these changes is a mistiness, and a capacity of seeing objects more distinctly when held to one side. This is owing to the fact that the region of the yellow spot is generally affected. The first organic change is said to be a distention of the vessels of the retina with blood. Ecchymoses and hemorrhage follow, according to Liebreich, in the inner layer of the retina, producing a striated appearance. Finally, we have fatty degeneration and opacity. In addition, more especially in advanced disease, yellowish-white spots are discernible with the ophthalmoscope, which may result from transformation of extravasated blood, red in the first instance.

Another common attendant and resultant of this form of disease, and present therefore in advanced stages, is *hypertrophy of the heart*, undoubtedly due in part to the resistance which the blood meets in its passage through the constricted organ, but which is perhaps also contributed to by the poverty of the blood. It usually evinces itself by physical signs, sometimes by reduplication of the first sound, as in two cases reported by Dr. Sibson in the *British Medical Journal* for April 1, 1871, p. 338. The reduplication is attributed by this gentleman, and apparently justly, to a want of synchronism in the ventricular systole.

The *prognosis* requires great caution, because our patient may live, with appropriate care and treatment, many years, while exposure to cold and wet, or even fatigue, may be attended by the development of symptoms which speedily result in death. If the pregnant state supervene upon this condition, the woman is placed in great danger. She will almost inevitably have convulsions before or during her confinement. The diagnosis having been carefully arrived at, the safest course of the physician is to state the exact truth to his patient, which is generally this: "With the greatest care in avoiding exposure, wet, and fatigue, you will probably live and enjoy life many years, but neglect of these precautions may result disastrously in a few hours."

The following cases are illustrative of the mode of origin and cause:—

A gentleman, aged fifty, wealthy, but deeply engaged in mercantile pursuits, had occasionally felt vaguely unwell, but put off the rest which he thought would at once revive him. Finally, he sought medical advice. A specimen of urine was sent me for examination. It contained a small quantity of albumen and a few hyaline casts, containing an occasional oil-drop. In the course of a few days convulsions and coma supervened, and he died within two weeks from the time our attention was called to his condition.

Here the condition had existed probably many years. Had it been earlier recognized, and the advice of a physician taken, his life might have been longer extended.

The following case is interesting in that it illustrates the duration, as well as the occasional trifling effect on the general health of the patient, and in that it is at present, and likely to be for some time, under observation.

Mr. F., aged thirty-five, thinks that in 1855 he over-exerted himself by heavy lifting, after which, for four years, he was scarcely able to work. He contracted gonorrhœa in 1863, which became a "gleet," and continued until November, 1865.

* G. Stewart, "Bright's Diseases," p. 110.

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In September, 1865, he noticed general swelling, for which he consulted a physician in the following November, and was told he had Bright's disease of the kidneys. A dose of calomel was also administered, and acted powerfully. He arose in the night, voided his bowels in the open air *en déshabillé*, and the next day had an attack of orchitis. In April, 1866, he passed under the care of my friend Dr. Cleaver, of Philipsburg, Pa., to whom I am indebted for the facts of these notes. The doctor found his urine with a sp. gr. of 1015 to 1020, and furnishing a precipitate of albumen equal to three-fourths the bulk of the fluid tested. No microscopic examination was made. At this time his dropsy was immense; his abdomen fluctuated as he walked, and the entire phalanx of a finger could be thrust into any portion of his lower limbs. He was ordered tincture of the chloride of iron, with a generous diet. He was also dry- and wet-cupped in the lumbar region, with relief to a pain of which he had constantly complained since the injury to his back. The chloride of iron acted as a diuretic as well as a chalybeate in his case, and in six weeks the anasarca had quite passed away, and the albumen diminished to one-twelfth of the bulk of urine tested.

A small quantity of albumen persistently remained. The man felt scarcely indisposed, but was aware of the presence of the albumen, and was anxious to get rid of it. In the summer of 1867 his physician sent him to me. He had the aspect of one in perfect health. There was no dropsy, and he said he did not feel otherwise than healthy, except that at times perhaps he felt a little weak; but stated also that if it were not for the albumen in his urine, which he was in the habit of testing himself, he would not believe that he was ill. His urine was pale, deposited a very minute quantity of albumen on the application of the usual tests, and contained typical hyaline casts, in some of which a drop or two of oil were present, while a few free oil-drops were also noted. I had little doubt of the condition of his kidneys, but conferred with Dr. Da Costa, of this city, who also examined the urine and concurred in the conclusion arrived at,—the existence of a chronically-contracted kidney. Since then he has taken little medicine, has continued to attend to his business, does not complain of being ill. He has had a second gleet, and Dr. C. informs me that he has been dilating a stricture successfully. On September 1, 1870, there was a slight deposit of albumen, just filling the convexity of the test-tube, and a very few hyaline casts were found. Reaction acid; sp. gr. 1024.

An interesting question with regard to this case is that of the exact date of the onset of the malady. Injuries to the back, such as that described, rarely produce renal disease, and, although there is room for considerable doubt, we should be inclined to believe that the disease began later than 1855, though the patient is himself disposed to date it from that time. Since he was in the army subsequently to 1860, we do not think it reasonable to date the disease prior to 1862; so that he may be said to have been the subject of the malady about nine years.

The following case illustrates well the insidious approach of the chronically-contracted kidney, but particularly the changes which result from an improvement, which must not be allowed to mislead us into a too favorable prognosis:

Lizzie T., aged twenty-one, an intelligent girl of Irish nativity, came under my notice in the summer of 1868 with typhoid fever, slow convalescence, and recovery; but she never became so robust as she was when she first came to this country in 1867. Between this date and the spring of 1870 she consulted me on one or two occasions, and during the warm season of 1869 was for some weeks quite feeble, but continued at her post in the store of her aunt, and after a few weeks in the country returned unusually well, remaining thus until February, 1870, when I treated her for an ordinary attack of bronchitis. Her slow convalescence from this attack and persistent *weakness* excited my concern, and led to an examination of her urine, which was found to be slightly albuminous, and to contain granular and hyaline tube-casts. There was no œdema, and the only symptom of which she complained was *weakness*. She was placed upon acetate of iron with quinine. The acetate of iron was, however, soon substituted by infusion of quassia with the tincture of the chloride of iron, under which she rapidly improved, and in the course of a month or six weeks was as well as previous to her catarrhal attack. *Albumen and tube-casts had both disappeared.*

On July 28 the weather was very hot, and I learned that her appetite, which had been so good, had again failed. An examination of her urine revealed again *the presence of albumen* more copiously than previously to its disappearance (about one-sixth of the bulk of urine tested), *accompanied by granular* and *hyaline* casts of large size. The iron and quassia were again ordered, and the patient urged to hasten the visit to the country for which she was preparing.

On August 24 her urine contained neither albumen nor casts. Her health was much improved, and she had gained five pounds in weight.

She remained in good health until February 10, 1871, when she again took cold, and had a similar attack of bronchitis, with asthma. During the autumn of 1870, the urine contained neither albumen nor casts, but in February, 1871, it had become slightly albuminous, and contained granular and hyaline casts. She again felt markedly weak, was without appetite, and lost some flesh. At this time, however (May 4), she is much better, and the *urine is without albumen or casts.*

C. The Lardaceous or Albuminoid Kidney.

Synonyms.—*Amyloid disease, waxy kidney, depurative disease.*

This is a condition in which the elements of the organ are gradually substituted by a peculiar albuminoid substance of acid reaction, usually described as glistening, resembling molten wax or boiled starch to the naked eye, but which is best recognized by its striking a *deep mahogany red* instead of the ordinary yellow with a solution of iodine.* Occasionally only, the further addition of sulphuric acid produces a *blue* color similar to the reaction of starch; hence the term amyloid disease, applied by Virchow.

Pathology.—The change begins in the blood-vessels, according to Stewart and Beale primarily affecting the capillaries of the Malpighian body, and extending thence to the middle or muscular coat of the small arteries. According to Dickinson, however, it begins in the arterioles. The vessels of either the convoluted or straight portions, or both, may be the seat of primary invasion, but it rapidly extends over the entire organ. The changes in the kidney up to this point are scarcely appreciable to the unaided eye, and would readily escape the inexperienced, since the exterior, size, weight, and color are normal. In section, a simple lens might show increased size and translucency of the Malpighian bodies; but iodine is more useful than the microscope. The change is best studied by first treating with iodine, and subsequently examining microscopically with a low power, —say fifty diameters.

Soon, however, the glistening matter extends beyond the muscular coat of the arteries, both within and without it, producing a more palpable thickening and diminished calibre. Then it proceeds beyond the vessels. The tubules also become involved, chiefly by the exudation into their interior of a glistening material which both Grainger Stewart and Beale represent as not usually exhibiting the peculiar reaction of the albuminoid substance, while Dickinson asserts that it does occasionally exhibit such reaction. It is this substance which produces the casts found in this disease, with regard to which the same difference of opinion exists, Stewart alleging that he has "never seen the casts present the peculiar reaction with iodine," though he has "occasionally seen appearances somewhat like it." Can it be that this substance, which it would seem must be the same in the cavity of the tubules as in the walls of the

*A solution containing one part tr. iodine, one part alcohol, and two of water is suitable.

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vessels, exhibits different properties when free, and forming casts, as in the former, from what it does when infiltrating, as in the latter? The fact that the basement membrane never exhibits the reaction, as alleged also by Stewart, need not invalidate this supposition, since, on account of its extreme tenuity, it probably cannot *hold* the exuded substance, but allows it to transude.

As the result of the increased deposition, however, more marked changes are presented in the organs. 1. They are larger and heavier, though the capsule strips off as in health. The surface may be paler. 2. On section, a relatively increased extent of the convoluted substance is noted; it is also pale or yellowish, bacon-like, and firm, and exhibits more markedly the peculiar translucency referred to, and the Malpighian bodies are now seen more distinctly exhibiting the change. The pyramids of the straight tubes, perhaps by contrast alone, appear pinkish in hue.

Microscopically, by a low power (forty to fifty diameters) more satisfactorily than by a high one, a somewhat peculiar, highly-refracting transparency is noted in the vessels and tubules; but here, too, the study is best made by iodine. By this means, in connection with the microscope, the tubes will be seen increased relatively in calibre, in consequence of the distention by the exuded substance. By a higher power (three hundred diameters) the cells, according to Beale, are "usually much *reduced in size*," "for the most part wasted, smaller than natural." According to Grainger Stewart, however, the secreting cells present "the *swollen*, dimly translucent appearance;" but according to both of these authors, they cannot be said to be infiltrated with the amyloid substance, as the liver-cell is in the same disease, and the peculiar reaction is wanting. Dickinson and others, however, contend that the cells are also the seat of the change. The discrepancy between Beale and Stewart we believe reconciled by the fact that both conditions of cells present themselves. Some are evidently shrivelled, while others may be said to be swollen. The cells also occasionally contain globular and granular fat, while the same substance is occasionally found in the intertubular tissue.

Finally, according to Stewart, the stage of atrophy is reached, in which, he says, "the organ is reduced in bulk and weight. The capsule may be torn off without much difficulty. The surface is uneven, rough, and granular, of a pale, waxy color, but also occasionally mottled here and there with sebaceous-looking material. On section, the cortical substance is found much diminished, while the cones are nearly natural. The Malpighian bodies are large, prominent, closely grouped together; the tubular structures are wasted; the smaller arteries are dilated, and their walls thickened. On examining a thin slice under a low power, we find the relative increase of the vascular elements very remarkable. In some parts, and in extreme cases, I have seen the Malpighian bodies so closely grouped together as to remind one of a bunch of grapes, the degenerated artery representing the stem. The tubules here and there continue distended; but most are atrophied, their walls collapsed, and represented only by fibrous tissue. The degree of atrophy varies in different instances, from about the natural size of the organ to a fourth, or even less."*

We have introduced entire the description of Dr. Stewart, because this stage of contraction we have not met, and therefore cannot speak of it from personal knowledge. Even Dr. Stewart says with regard to it that he has not yet traced a case from its commencement to its fatal termination, and is not aware that any case has been so observed. He had examined the kidneys of a case under observation for three years, and the kidneys were not much smaller than natural; and in a second case, of six years' duration, the kidneys were less atrophied than he had frequently seen them. (Bright's Diseases of the Kidney, p. 70.) Is it not possible, then, that there might have been coexistent contracting kidney?

The kidneys are rarely, if ever, the only seat of this deposit. Most frequently the liver and spleen are similarly changed and enlarged in consequence. They also exhibit the iodine reaction. In advanced albuminoid disease, the stomach and intestines are also the seat of the peculiar deposit, giving rise to the vomiting and diarrhœa which are constant symptoms.

Clinical History and Diagnosis.—A person of a scrofulous diathesis, or who has had syphilis or tuberculosis, scrofulous, syphilitic, or indeed any suppurative disease, especially of the bones, or even one in whom none of these are traceable, notices increased disposition to micturition; also that the quantity of water passed is excessive. He is, perhaps, unusually annoyed at night, and, if observing, notices that the quantity discharged is in excess of water consumed. Coincidentally, perhaps, slight dropsy is noted, more particularly about the feet, which passes away after a little rest, but later becomes persistent. This is usually slight, though I have known it general and extensive. Dr. Dickinson† is inclined to believe that the persistence of dropsy while the urine is increased is peculiar to this disorder. Diarrhœa and vomiting are not infrequent; the former, indeed, is often a cause of death later in the disease. Weakness and indisposition to exertion are also perhaps noted, and soon become marked; the patient looks worn and cachectic.

The advice of a physician is now asked, who may examine the urine, which will be found at first slightly, but later highly, albuminous, contrasting strongly with that from the contracting kidney. It is acid, and increased in quantity (50 to 200 oz. in 24 hours); is pale, watery, and of low specific gravity—it may be as low as 1005, and rarely exceeds 1015. The later diminution in quantity is not attended by changes in physical and chemical characters; Dickinson has shown that there is little diminution in the quantity of urea. Microscopic examination reveals casts of the hyaline kind, many of which have this peculiarity, that they are solid, cylindrical, and therefore much more distinctly visible than the ordinary hyaline casts found in the urine from contracted kidney. These have seemed to us quite distinctive, although they are not alone in this form of Bright's disease, nor confined to it. They are generally of small diameter, formed in tubes whose epithelium is intact; the cells seem to be cemented and rendered more permanent in their situation by the exuded matter. Occasionally epithelial casts are also present, and even casts containing oil-globules may be found. As stated, according to Dickinson, these casts *occasionally* give the iodine reaction, which Beale and Stewart both deny. We have never seen such response, but cannot consider it impossible; on the other hand, we should expect it more constantly. In his further study of the case, the physician will generally discover the liver to be enlarged, and perhaps also the spleen; occasionally the latter only. With these facts, and the history of suppurative disease, he is not likely to be deceived.

Prognosis.—As the disease approaches its invariably fatal end, its progress is more variable than that of the acutely inflamed or contracting kidney. For although generally shorter than the latter in its duration, it is sometimes quite as prolonged; and, though always chronic, its occasional late detection causes it to simulate even the acute disease in its course.

* Bright's Diseases of the Kidney, p. 69.

† Pathology and Treatment of Albuminuria, p. 191.

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It is not impossible, according to Dickinson, for the organ to reassume its normal state if the primary source of mischief ceases before the structural changes are too extensive.

Convulsions or coma rarely supervene; on the other hand, death is more commonly accelerated by diarrhœa or pneumonia, the former more frequently. Inflammations of serous membranes are prone to occur, but, except in the occasional instance of peritonitis, rarely produce death. An interesting case, attended by this complication, is reported in the Proceedings of the Pathological Society of Philadelphia, published in the present number of this journal. In no other form of renal disease, except the fatty kidney, is so little advantage derived from treatment,—a further reason for justifying a generally unfavorable prognosis.

D. Mixed Cases.

It is undoubtedly the fact that many cases of renal malady present themselves in which there is a combination of two conditions. Thus, a kidney may be chronically contracted and lardaceous at the same time, and the combination of the fatty and the contracting state is also noted. This is the fatty and contracting kidney of Dr. Beale, of which the writer reported a typical case in the Proceedings of the Pathological Society of Philadelphia, in the spring of 1869 (*Am. Journ. Med. Sci.*, January, 1870).

It is not unreasonable to suppose that the imperfectly-formed fibrous tissue of the *fatty and contracting* kidney may originate in the way assigned by Dr. Beale for the production of the cirrhotic kidney. So, too, it is not unlikely, in cases of chronic disease after acute scarlatinal dropsy, in which hyaline casts present themselves, with little or no fat, that the organ has undergone a contraction of this kind; that the tubules, having been stripped of their epithelium, become useless, shrivel up, and assume the appearance of fibrous tissue, and that such a kidney will be found after death instead of the large white organ commonly met with in scarlatinal nephritis which has gone on to the second or chronic stage. Such a kidney we would expect to result where a parenchymatous nephritis, of Virchow and Stewart, has passed through its second stage of fatty degeneration, and reached its third of atrophy.

Such a case may be the following, reported by my assistant, Dr. Louis Starr:

John G., white, aged eighteen, is an upholsterer by trade. When six years old, he had scarlet fever, followed by dropsy. This apparently disappeared under treatment, and he remained in good health for six or eight years. About two years ago (July, 1869) he suffered from a second attack of dropsy, attended with much swelling of the legs and face. He had no fever, but his urine was scanty and often dark in color. No sufficient cause can be found for this last attack. He states, however, that he had taken a bath but a short time before it came on, but was neither very warm nor perspiring at the time. He was treated by several doctors, under whom he improved.

He first came to the University of Pennsylvania May 13, 1870, when his legs and feet were œdematous. His appetite and digestion were good. He was placed upon the solution of the acetate of iron. Under this treatment his general condition improved much, the œdema disappeared, and the albumen diminished, but remained considerable.

In clinic, on March 23, 1871, he again presented himself, complaining of a sense of languor and weakness, and of being unfit for any bodily exertion; he also often feels chilly, and his feet and hands are cold. There is no œdema about the eyes, but that of the legs remains slightly; is barely appreciable. He states that his legs become much more swollen at night. His appetite and digestion are good, and he has no headache or convulsions. His urine is pale in color, and on standing a white flocculent deposit falls, forming about one-twentieth of the bulk. Sp. gr. 1008. Reaction slightly acid. On heating and adding muriatic acid, a considerable deposit of albumen takes place,—about one-fourth of bulk tested. Microscopical examination of the urine shows granular and hyaline casts. Occasionally an epithelial cell or a few oil-drops are contained in a cast otherwise hyaline.

He was ordered gallic acid, gr. v, three times a day, with acetate of iron in the form of Basham's mixture. The gallic acid was afterwards increased to gr. xv three times a day, and again to gr. xv four times a day. The œdema disappeared entirely, and his general condition constantly improved, but the condition of his urine as to quantity of albumen and presence of casts remains unchanged. At this time (May 4) he is feeling quite well; there is no dropsy; the albumen has diminished to one-eighth the bulk of the urine tested; a volumetric analysis of the morning urine, made to-day, gave 32 grammes of urea in 1000.

In conclusion, let us sum up what seems to have resulted from this study. First, we have acute Bright's disease and chronic Bright's disease. The former includes a single condition of acute nephritis, whatever be the method by which produced, easy of diagnosis, and generally favorable in its termination, but occasionally passing over into a chronic form of fatty transformation, and possibly also into that of chronic contraction. Chronic Bright's disease includes, first, the fatty kidney, which may originate idiopathically, or result from acute inflammation, generally easy of detection, and fatal in prognosis. Second, chronically-contracted kidney, which, though usually originating idiopathically, *may* result from an acute nephritis,—generally recognized, if careful examination is made,—ultimately fatal, but with which life may be kept up many years, and which may even exist many years unrecognized. Sudden death may occur. Third, the lardaceous, albuminoid, or waxy kidney, similar in its early symptoms to the chronically-contracted kidney, but usually capable of recognition in connection with the history, condition of liver and spleen, and large quantity of albumen as compared with the former. Prognosis ultimately fatal, though the end may also be averted. Fourth, we recognize certain mixed forms, difficult to discriminate in their precise conditions during life, and fatal in proportion to the degree and kind of degeneration, with regard to which there must also be considerable uncertainty.

A CASE OF ACCIDENTAL OPIUM-POISONING TREATED BY BELLADONNA. RECOVERY.

BY C. H. ALDEN, M.D.,
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L. R. took by enema, at about five o'clock P.M., January 21, 1871, between twelve and fifteen grains sulphate of morphia. She had at times, but not habitually, used injections of this remedy into the vagina and rectum, but by some mistake was not aware of the large dose she was taking on this occasion. It was dissolved in about two fluidounces of water, and was all retained. The medicine began to produce its effects in about thirty minutes, but, neither the cause nor the serious nature of her condition being understood, medical aid was not called in until about 8 P.M. At this time I found her in bed, slowly rolling her head, her eyelids half closed; conjunctivæ injected, the pupils contracted to mere points; irides immovable; sometimes talking in a partially incoherent, excited manner; skin cool; feet quite cold; lower extremities deficient in sensibility and lying motionless; pulse 60; respiration nearly normal. Her mind was much confused, but when persistently addressed, her attention was aroused, and she replied, though rather incoherently. She said her head felt very heavy; she suffered from vesical tenesmus, but was unable to pass her urine, from an intolerable itching of the skin, and from nausea. She vomited at intervals. She said she saw every object double and very indistinctly. About eight or ten

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fluidounces of urine were removed by the catheter, and a large quantity of warm water was injected into the rectum. No motion taking place, and a soap suppository also failing to excite it, a stomach-tube was introduced into the bowel and the contents drawn off as thoroughly as possible. Through the same tube more water was thrown in and withdrawn. Hot applications were made to the feet, and sinapisms put on the calves of the legs. Small draughts of strong coffee were given, but were mostly rejected by vomiting. Extract of belladonna was administered in ¼-grain doses every half-hour until three grains were taken. The tendency to sleep increased somewhat for a time, and twice she fell asleep, though constantly talked to, but was soon aroused. Towards 11 P.M. she became less somnolent, the nausea diminished, and she began to complain of pain in the region of the stomach. Her eyes were still heavy, pupils unchanged, and mind still confused; pulse rose to 72. The pain in the stomach recurred every few minutes, and became at times very intense. She made loud outcries, ground her teeth, and threw her arms about violently. She described the pain as like that of cramp She now complained of great thirst. Hot fomentations, a sinapism, and the tin stomach-warmer were successively applied over the stomach. Warm drinks were administered, and two grains of extract of belladonna given in divided doses. I would have tried chloroform by inhalation cautiously, but she had been warned against its use by some former medical attendant. The vomiting had now ceased. Towards 2 A.M. the pain became gradually less, and was felt more in the region of the umbilicus. She was considerably exhausted. The pupils were unchanged, and her mind was still clouded. The lower extremities had become warmer, and she had some power over and sensation in them. I directed small amounts of strong broth to be given every hour, and that she should be allowed to sleep if she could.

Jan. 22, A.M.—She has not slept since last visit. Her mind is now a little less confused. The pupils are unchanged. She is extremely excitable, sometimes crying, again starting when a person comes near her. Pulse 72. Complained of pain from inability to pass water. About twelve fluidounces were removed by the catheter. To continue to take concentrated nourishment at short intervals. P.M.—Has not slept since last visit. Condition about the same in every respect, except that pulse was about 90. Catheter again necessary, removing about twelve fluidounces of urine. Prescribed two fluidrachms of elixir valerianate of ammonia, and, if necessary, one fluidrachm every hour, until four doses shall have been taken. If she still does not sleep, to take twenty-five drops of the fluid extract of hyoscyamus.

Jan. 23, A.M.—She slept about ten minutes last night. Her condition when first seen this morning was about the same as last night; but towards noon her face became flushed, severe headache came on, and her pulse rose to 120. Pupils unchanged. Ice was applied to her head, a mustard footbath was administered, and sinapisms were applied to her lower extremities and between her shoulders. Cups were inadmissible, owing to her excitability. Her bowels were moved by a purgative enema. She passed urine naturally. During the night the symptoms of congestion of the brain abated, and early in the morning she slept about four hours.

Jan. 24, A.M.—Her condition is now very much improved. Now for the first time since the attack commenced her pupils are of natural size or nearly so, and the irides are movable. Her mind is now quite clear, and her pulse has fallen to 72. She is still quite weak, and there still remains some irritability of the nervous system. It was about a week before she recovered her usual health.

On examining the sulphate of morphia, of which that taken was a part, I find it bears the label of T. and H. Smith, Edinburgh and London. It is more compact than the ordinary article, and very slightly discolored. Given in ¼-grain doses, it proves to be somewhat deficient in hypnotic power, but produces no unpleasant symptoms. It has the usual reactions of a morphia salt. It should be noted that this patient generally avoids opiates, on account of their constipating tendency. The prominence of the gastric spasm and the persistence of the contracted condition of the pupils will be noticed, as also the effect upon the lower extremities and bladder. It soon became evident that the danger lay in exhaustion rather than from the direct effect of the poison. Disliking to force sleep by pushing any medicine, I relied chiefly upon nourishment supplied frequently and in proper quantities, trusting that, under its calming and restorative influence, natural sleep would be induced. It was delayed much longer than I anticipated. The five grains of extract of belladonna, given within the space of a few hours, produced no effect upon the pupil, though it was known to be active and was probably retained.

MAMMARY ABSCESS AND ITS REMEDY.

BY JOSEPH R. BECK, M.D.,
Lancaster, Ohio.

AMONG all the troubles incident to, or connected with, child-bearing, there is none so prolific of bad results, both to the medical attendant and to the parturient patient, as a mammary abscess. The occurrence of such an abscess in his patient has lost many a physician his reputation in a whole family, and very frequently not only in the immediate family of the sufferer, but even in the whole of a wealthy and influential connection. The attention of the profession cannot be too strongly directed to this fact, that the occurrence of a mammary abscess in a patient recently delivered, and still under observation, is generally attributed to the neglect of the physician in charge. This may appear to be a wholesale accusation, but my opinion is based upon close observation, and seems to me to be fully sustained by the facts in the case.

It is not the purpose of this article to treat of the symptoms of this disorder, nor to enter upon a discussion as to the relative merits of different plans of treatment, but simply to give the views of *one* observer upon the mode of effectually preventing any abscess of the mammary gland from troubling either the patient or the obstetrician.

The symptoms of inflammation of the gland under consideration are well known to the profession. Whenever these arise, every effort should be made to arrest the secretion of milk; this will relieve the mother, and not necessarily interfere with the well-being of the child, which, if proper care be taken of it, will generally be found to thrive upon good and pure cow's milk, with the occasional addition of a small quantity of lime-water.

The treatment, therefore, is to be begun as soon as there are any symptoms that mammary abscess is likely to occur. I have found the following prescription of service:

℞ Extract. Belladon. Alcoholic., ʒiv;
Glycerinæ, q. s.;

mix them to the consistence of a moderately thin paste. This is to be spread in a medium thick layer with a spatula, over and upon both mammary glands, from the sternum to the axilla. Cover with a cloth dipped in olive-oil, and this in turn with oiled silk. Allow the dressing to remain undisturbed during a variable period of from two to three or four weeks, inasmuch as it can be worn by the patient for any length of time without inconvenience.

The argument in the case is directed, of course, to threatening abscesses; but all will at once recognize the appropriateness of the treatment in cases of still-born children, where it is certainly desirable to arrest the secretion of the milk at once. In these cases apply the remedy within an hour or two after the birth of the child. I have never known this treatment to fail of its desired effects, where it was used in time.

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A CASE OF OBSCURE CEREBRAL DISEASE.

RECOVERY AFTER THE ADMINISTRATION OF IODIDE OF POTASSIUM.

BY J. CUMMISKEY, M.D.,

Physician to St. Mary's Hospital.

GENEVIEVE F——, æt. nineteen, by birth a German, entered the St. Mary's Hospital, June 17, 1869, suffering from symptoms of acute meningitis, which was occasioned, it was supposed, partly by a fright and partly by exposure to cold during the menstrual period. For some days after admission she was very violent and difficult to control; but finally she became calmer, and then passed into a condition of apparent imbecility. She would sit day after day in the same position, noticing nothing that was passing around her, nor replying to any questions that might be put to her. Medicines, producing little effect, were discontinued, and the unfortunate girl came to be looked upon as hopelessly insane.

This was her condition when I came on duty, October 1, and as nothing special was being done for her, and, indeed, as I knew of nothing that could be done for her, she was generally passed by with a single inquiry to the resident as to her condition, which elicited always the same response, "She is no better." Sincerely pitying the poor girl, and wishing to do something, in appearance, at least, to relieve her, I determined to try the effect of iodide of potassium. Accordingly, about November 15, she was given this salt in ten-grain doses three times a day. The effect was astonishing. In a few days after commencing the iodide she began to show signs of intelligence. She steadily improved under its use; and in three weeks after taking the first dose she was discharged cured, December 10, 1869. She, whose mind had been clouded for nearly six months, who had been mute for about four months, and whose restoration was despaired of, was, under the use of iodide of potassium, restored to health and to her family.

The history of this case is written from memory, the notes having been unfortunately lost.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SURGICAL CLINIC OF PROF. D. HAYES AGNEW.

Reported by Dr. F. Muhlenberg.

VASCULAR NÆVUS OF FACE.

THIS young gentleman has consented to appear before the class this morning, and comes a long distance—from the northern part of New York State—for relief from one of those varieties of vascular tumors which very often prove a source of much anxiety to physician and patient, and eventually require the aid of the surgeon for their removal. He is but twelve years of age, and has had this growth since birth. At first it was comparatively small, but it has gradually been increasing in bulk during the past five or six years. It should have been extirpated long since, as very often, owing to the nature of these tumors, the surface ulcerates, and death sometimes suddenly occurs from the free hemorrhage which ensues.

These vascular or erectile tumors are commonly known as nævi materni, or mother's marks, and are not only very unsightly from the bright scarlet or deep blue contrast which they make with the surrounding normal tint of the skin, but also prove a source of danger to the patient, since they frequently, as just stated, ulcerate superficially, and bleed most profusely. As a rule, they may be said to be congenital, but cases are not wanting in which there has been no manifestation of their existence for seventeen or eighteen years after birth, and even for much longer periods,—one instance being on record in which the patient was fifty years old. This mass, as we perceive on examination, is of considerable size, blue in appearance, compressible, slightly lobulated, has a perceptible pulsation when compressed by the fingers, is subcutaneous, and is situated along the side of the nose, extending from the angle of the mouth upward to the inner canthus of the eye, and outward to a point on a line with the external canthus. It is, no doubt, fed by the arteries which, from your anatomical knowledge, you know to exist in this region, viz., the transverse facial, facial, infraorbital, angular, etc., rendering it, therefore, exceedingly vascular and difficult of removal.

These nævi are essentially the same as erectile tumors, or those frequently spoken of as aneurisms by anastomosis; and, indeed, the resemblance they bear to the erectile tissue of the corpus cavernosum is so close that, in their general structure, no marked difference can be found to exist. The tumor may, therefore, be regarded as a mass made up of narrow bands or chords forming the walls of a vast number of spaces filled with blood, supplied by the connecting arteries and veins. The comparison which will give you the clearest idea of its construction is to a sponge soaked in blood,—all the cells in which open freely and widely into one another. This explains the freedom with which it yields to compression, as sometimes we can empty the mass to half its size, but as soon as the force is removed it fills up again. Many pathologists, since the researches of Paget and others have been made, take the ground that most of these erectile or vascular tumors, especially if like the one before us,—the *subcutaneous* variety,—are collections of minute *dilated* blood-vessels, arranged in the closest manner possible, in a limited area of some normal structure. Microscopically, they have been found to have arteries passing into the base from the under surface of the skin, and veins passing out in all directions from them, much larger than the entering vessels, and also much more numerous. Suppose, now, you recall the appearance of a mass of varicose veins, and imagine them all intermingled and intertwined, you would have a good idea of the reticulated character of this mass, with the integument dissected off. A prominent microscopist abroad has stated that he has observed, along the track of the vessels entering and emerging from these tumors, numerous little *culs-de-sac* which could be emptied or filled at pleasure by alternately increasing and diminishing the pressure upon a piece when under the microscope. These *culs-de-sac* were, as a rule, twice as long as the vessels were wide, and smaller at the end towards the vessels than at the end towards the tumor. It has been found, however, that even if the blood-vessels in the *mass* of the tumor are thus dilated, the dilatation does not extend very far into the main arteries leading to it and veins emerging from it; the former enlarge only just before entering, and the latter soon regain their normal size after leaving it. The rule, therefore, to be followed in this case, as in all others of a similar nature, is that given by Sir John Bell, "not to cut into it, but to cut it out." Sometimes the arteries running into the mass are largely dilated, and the veins less; again, the reverse obtains. These remarks will give you some idea of the difficulty of treating these cases except by surgical interference, and of the precautions necessary to guard against cutting into them during their extirpation.

Upon a closer examination we find this mass to extend down to the mucous membrane lining the interior of the cheeks and mouth; and were it not that we wish to avoid performing an experimental operation upon this patient, as I have no precedent to guide me, I would ligate it from the inside of the mouth by transfixing it with a double ligature, and allow it to separate from the surrounding tissues by the sloughing process. It might, however, be a bad procedure, for the discharges, which would be constantly running into the mouth, would be very offensive, and might set up an amount of irritation, locally and generally, which would interfere much with the subsequent cure of the affection.

The patient has now been etherized, and we will proceed to remove the mass by making a crescentic incision from the inner edge of the orbit down the side of the nose to the angle of the mouth, and a short distance along the edge of the upper lip, just at the line where the skin and mucous membrane became continuous. This incision is then joined above by one extending from the outer canthus of the eye and beneath the edge of the orbit. Our object is, of course, to avoid as far as practicable an unsightly scar after the removal of the tumor, but, as it is situated just over and among some of the most important facial muscles, the task is by no means an easy one. Having now made our incisions through

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the skin and subcutaneous tissue, we will dissect up this flap, beginning from the inner canthus of the eye, and being exceedingly careful not to cut into the vascular growth under our knife, an accident which would occasion exceedingly troublesome hemorrhage. The upper border of the mass has now been carefully exposed with comparatively little loss of blood, and we now commence dissecting upwards at the angle of the mouth. It is quite a difficult matter in this region to avoid cutting into the tumor, as its connections run down almost to the mucous membrane itself; but we have been successful in dissecting it up from that membrane by alternately seizing it with the fingers and forceps, and using the knife with extreme caution. The branches and the main trunks of the arteries, which have been cut, have been ligated; and as we have now reached the upper border of the orbicularis-oris muscle, and have a sufficient quantity of the mass free at its base, we will transfix it with a needle armed with a double ligature, and tie this firmly both ways, so that each embraces and surrounds one-half the base. This having been done, the upper edges of the flap are now united by the silver wire, the ends of the silk ligatures drawn out of the dependent angle of the wound, the strangulated mass covered with lint saturated with the carbolic acid solution, and the parts allowed to slough out, which process will probably be completed in a week's time.

[In a week the patient was presented to the class again. The tumor, as ligated, had entirely sloughed off, and the parts were ready to be approximated by adhesive straps, as the edges, although healthy in their appearance, would not allow of silver wire being introduced. On the fifth night after the operation he had a slight hemorrhage from the angle of the wound near the mouth, but this was quickly and easily controlled by a compress. A cerate dressing was placed over the wound, and this covered by a firm compress, and the patient attended to daily. In two weeks subsequent to the operation he started for his home, in New York State, the wound having nicely healed throughout by granulation, except at the most dependent corner, and having left hardly any perceptible cicatrix.]

ANCHYLOSIS OF JAW FROM FRACTURE OF ZYGOMATIC PROCESS.

This patient, who is eighteen years of age, and comes here from Washington county, was kicked in the face, when only eleven years old, by a horse. At that time violent inflammation set in, and various fragments of bone came away, showing that a fracture of the zygomatic process of the temporal bone must have occurred. As a subsequent result of the attending inflammatory process, lymph was thrown out, this organized into the well-known connective tissue, so often found in these cases of injuries to the joints, and false anchylosis took place,—the boy being from that time up to the present unable to open his jaws more than an eighth of an inch. Upon examination, we find a scar over the left zygomatic region, two inches in length, and a considerable, hard, and resisting prominence in front of the ear. The temporal muscle has also become much hypertrophied from the constant efforts made to open and shut the jaws.

These cases of anchylosis are not at all uncommon, and, according to the amount of immobility that has been produced in the joints attacked by arthritis, are designated as *false* or *true*. True anchylosis involves the destruction of the interior of the joint and the union of the opposing ends of the articulating bones, and, consequently, the subsequent and complete immobility of the joint; or it may be produced by bony processes, which very often take the place of the ligaments. In false anchylosis, however, only a departure from the natural condition of the parts exists; the ligaments are only stiffened and contracted, and the tendons of the muscles playing over and about the joint are also thickened by the deposit of organized lymph. Thus we perceive the reduction of a false anchylosed joint is practicable by means of force and motion applied constantly, or at short intervals. This patient having now been etherized, we will try to dilate the jaws, or force them apart, by means of the screw forceps; but, having used as much force as is safe, we find our efforts are unavailing. Several operations have been devised for the relief of this affection, the principal of which are the one just attempted before you,—that of forcible dilatation by the screw forceps, —and division of the fibres of the masseter muscle. This latter procedure we now have recourse to, and introduce this knife between the muscle and bone and divide some of its fibres, and later some fibres of the temporal muscle. We can now succeed in separating the jaws to the extent of half an inch, and with the screw dilator have forced them open about an inch and a half. This treatment of forcible dilatation will be kept up for some time, so as to prevent a recurrence of the trouble by reunion of the muscle and formation of new adhesions around the joint.

[The patient under this plan eventually recovered motion sufficient for all practical purposes, and left for his home satisfied that a cure had been effected.]

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROFESSOR GROSS, APRIL 7, 1871

Reported by Dr. Ralph M. Townsend.

WITHERING SCIRRHUS OF THE BREAST.

THE attention of the class is called to the wasted, atrophied condition of the breasts of this patient, particularly the left. There is, however, no retraction of the nipple, but the woman complains of a fine, stinging pain like that left after a needle-thrust.

On the affected side there is slight enlargement of the axillary lymphatic glands; but these I will not remove, as they are probably affected by sympathy only. The gland will, however, be excised. There is not enough flap to cover the wound, so that healing must take place by the granulating process. The woman's general condition is passably good. Her tongue is about as clean as the tongues found in the majority of American women.

[Owing to the clean shave, which the dissection necessitated, of the ribs, considerable trouble was experienced in stopping the hemorrhage from the cut twigs of some of the intercostal arteries. The unsuccessful experiment was tried of using small cutaneous portions of the tumor as plugs. Pieces of lint soaked in Monsel's solution, applied directly to the several vessels, finally stopped the bleeding. A section of this tumor, on microscopical examination, showed the pectoral muscle to be involved and infiltrated with cancer cells. The cells themselves were withered and dwindled, and undergoing fatty degeneration. The patient presented herself at the clinic a week after the operation. Granulation was going on finely.—R. M. T.]

CONGENITAL WEBBED FINGERS.

Looking at this little girl, aged one year, it will be observed that the middle and third fingers, on both hands, are firmly webbed together. On the dorsal surfaces the line of junction is well shown, but on the palmar surfaces the fingers seem smoothly merged. Guided by the dorsal crease, we will separate the fingers on one hand, leaving the remaining hand for a subsequent operation. The cut edges on either finger will be approximated by interrupted sutures; and then the hand will be dressed with patent lint saturated with sweet oil, and bandaged.

SCROFULOUS ABSCESS.

The young woman who now stands before you looks the embodiment of health. She has a good figure, rosy cheeks, and a ripe lip; but, you will observe, a swelling occupies the left angle of the lower jaw. There is no discoloration of the skin, but the tumor, which has existed since last fall, is movable and fluctuates. With its first appearance came pain, but that has since disappeared. This tumor is not affected by swallowing: hence it is not connected with the larynx or trachea.

Now, this swelling affords ample field for diagnosis. A year ago she had earache, and this tumor followed its disappearance. This, therefore, may be a chronic abscess, having its origin in the inflammation and degeneration of one or more lymphatic glands in this region. These glands are extremely liable to become affected by reflected irritation, such as a toothache or earache might produce. Sometimes these glands simply enlarge and indurate, at other times they enlarge and suppurate. Such an abscess can occur only in a person laboring under a scrofulous or tuberculous diathesis.

Again, this may be a cystic tumor, although I imagine not, as it would hardly have acquired so great a bulk in so short a time. It may be simply an enlarged lymphatic gland, possessing this peculiar sense of fluctuation on account of its inherent elasticity. Finally, it may be an aneurism; but there is absence of pulsation, and I am therefore inclined to think it a chronic abscess. The exploring needle will tell. Pus follows

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its withdrawal and confirms the diagnosis. Now that I have opened this abscess, you see that I have collected about two ounces of imperfectly formed pus.

We will introduce a tent to cause deep-seated granulation to spring up. If this girl has anything like a chill, we will give her twenty-five drops of laudanum. Let her eat no meat; and keep her face and neck covered so as not to be exposed to the air.

CONGENITAL CYSTIC TUMOR OF THE CHEEK.

Margaret Brown, aged four years, has a congenital tumor of the cheek. The mass is lobulated, pear-shaped, and the seat of distinct fluctuation. I am inclined to think this a cystic tumor, multilocular or multiple, or made up of several cysts. I remember a remarkable case occurring in this city, of a similar tumor, which covered the side of the neck and face. When the child was six weeks old, I removed the entire growth, the child making an excellent recovery. Caution must be exercised in the diagnosis of these tumors. The best men are liable to be mistaken. Sir Astley Cooper tapped a woman for dropsy when she was simply pregnant.

This patient will return for an operation.

[*March* 19.—Operation performed. During its progress the cyst was tapped, and a quantity of chocolate-colored fluid escaped. The tumor consisted of many cysts imbedded in a mass of fat, and a good deal of fibroid tissue. The interior of the tumor was shining like serous membrane, and trabeculated. The parts, after the operation, were brought in contact by means of the interrupted suture, adhesive plaster, and compress.—R. M. T.]

GANGLIONIC TUMOR.

This young lady is aged seventeen years. She has a tumor on the back of her wrist, which rolls under the skin. This tumor is connected with the sheath of one of the extensor tendons, and is filled with an accumulation of synovial fluid. Such tumors are of common occurrence. One way to cure them is to break them, and thus have the synovial fluid diffused, and the parts then painted with tincture of iodine, and bandaged to assist in its absorption. Sometimes these tumors are filled with rice-like bodies, the latter being portions of the inner wall of the tumor that have become covered with lymph and detached.

In this case I shall puncture the tumor subcutaneously, squeeze out its contents, then paint the skin over it with dilute tincture of iodine, and apply a compress and bandage. You see the pellucid, jelly-like matter that follows the withdrawal of my knife.

SEBACEOUS TUMOR OF THE CHEEK.

A young girl, aged fourteen years, has a sebaceous tumor located on her cheek. Such a tumor as this is the result of the obliteration of the mouth of a sebaceous follicle. The retained secretion, augmenting, causes inflammation. The wall of the follicle receives more blood, expands, and thickens; and what before was an invisible now becomes a visible sack. The only remedy here is to dissect out the sack. The smallest portion left will redevelop the tumor.

[The sack was dissected out, and the parts approximated with two hare-lip pins, around which thread was wrapped elliptically. The pins were removed on the third day, and the suture allowed to remain until it dropped off.—R. M. T.]

VACCINATION OF PREGNANT WOMEN.—Dr. Barnes, in the *British Medical Journal* (March 4, 1871), urges the importance of vaccinating pregnant women, if they are at all exposed to the epidemic influence of smallpox, and for these reasons:—1. Pregnant women, living under epidemic or zymotic influences, are more prone to take the prevalent morbid poison than others; 2. Having taken a morbid poison, they are less able to throw it off. Their excretory organs, charged with the double duty of purifying two organisms, are liable to break down under the burden; 3. The morbid poison then pursues its course into a system which is less able to resist its injurious action. Abortion and a most dangerous form of puerperal fever are very likely to follow. Against this there is certainly a danger of producing abortion by vaccinating a pregnant woman, but this, Dr. Barnes thinks, occurs only in women in whom a miscarriage is imminent.

OBITUARY.

DR. JOHN ADDINGTON SYMONDS.—Although not so widely known in this country as some of his literary co-laborers, this gentleman, who died recently in England, contributed many valuable papers to medical serial literature, and lent his active co-operation to several of the great standard medical cyclopædias. He had been President of the British Medical Association; delivered the Gulstonian lectures in 1858, on "Headache," and also a thoroughly exhaustive lecture on "Death by Chloroform," before the Harveian Society. He was an excellent classical scholar, and was said to "combine in a degree seldom found in members of any calling the proficiency of a master in his profession with the many-sided culture of the votary of literature and art." He had several non-medical works dedicated to him, one of which, a translation of Horace's Odes, was a rare compliment to his classical attainments. He wrote, among numerous other papers, the article "Tetanus" for the "Cyclopædia of Medicine;" the articles "Age" and "Death" for the "Cyclopædia of Anatomy and Physiology;" the "Pathological Introduction" to Tweedie's "Library of Medicine," and most of the articles also on "Diseases of the Digestive Organs." But his contributions to literature were not confined to the domain of medicine; he wrote several miscellaneous works, conspicuous for their pure and elevated style, including lectures on "Apparitions," on "Beauty," on "Sleep and Dreams," etc. What he himself wrote on the death of Sir James Simpson may now be applied to the subject of our present obituary:—

> "He hears no clamor of polemic fray,
> Nor recks he what unthankful men may say;
> Little can vex him in that sleep profound."

A NEW AND SAFE METHOD OF DELIVERING IN ARM-PRESENTATIONS, AFTER OTHER METHODS HAVE FAILED.—Dr. Park B. Tucker, M.D., gives two cases (*London Lancet*, Feb. 18, 1871, p. 230) in which it was found impossible to turn the child. Its body was therefore perforated, and the abdomen and thorax sufficiently emptied to enable the physician to reach the bodies of the vertebræ. These were crushed with a common pair of tooth-forceps. The body now became bent at that point, and descended sufficiently low to permit the operator to pass a handkerchief around it. On making traction, the pelvis and lower extremities were born, followed by the trunk and placenta. Instead of tooth-forceps, the doctor recommends a pair of spring-cutting blunt pliers, with long arms, such as are used by dentists for cutting off incisor teeth, but on a much larger scale.

CARBOLIC ACID IN CARBUNCLES.—Dr. J. C. Nott strongly commends the local use of carbolic acid in carbuncles. He makes an incision into the inflamed tissue, stuffs this with cotton saturated with the acid, and also paints the whole surface of the hardened mass with the drug. The latter he repeats daily for a week or more as the case may require. His experience with the remedy, however, appears to be limited to a single case. This did extremely well, an apparently formidable carbuncle subsiding in a week.

RARE ENTOZOA IN THE HOG.—Dr. T. Spencer Cobbold calls attention (*British Medical Journal*, January 14, 1871, p. 50) to an interesting discovery in the hog of a remarkable parasite, the Stephanurus dentatus, a species of strongylus not alluded to in the works of Von Siebold and Kuchenmeister, and which has hitherto been described only by Dr. Carl Moritz Diesing, of Vienna, in 1839. Since then it seems never to have been met with until very lately by Dr. Fletcher, of Indianapolis, Indiana, who found great numbers of the worm in hogs killed for curing, and who forwarded the specimens to Dr. Cobbold for examination and determination. The true discoverer, Dr. Natterer, obtained his specimens from one or more individuals of a Chinese race of hogs at Barra do Rio Negro, Brazil, on 24th March, 1834.

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THE MEDICAL TIMES.
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EDITORIAL.

FOUNDLING-HOSPITALS.

"GINX'S Baby, his Birth and other Misfortunes," is the title of an anonymous work which has attracted such general attention that the fifth English edition is already exhausted, though but a few months have elapsed since the book was first issued. The story is full of pathos, and bears witness that the author is terribly in earnest. With ruthless hand he lays bare ugly and repulsive facts, from which an easy-going public, half willing to remain in ignorance, now turns with a shudder of horror. It is impossible, it cries, with our system of poor-laws, foundling-hospitals, public and private charities, church organizations, and social science committees, that such a lamentable state of affairs can exist! "I never read a more improbable story in my life," writes the critic. "Nevertheless it may be true," rejoins the unknown author.

Another publication has recently been issued in New York, which has also attracted marked interest and attention, entitled "The Education and Care of Abandoned Children," by Dr. Abraham Jacobi. Here the subject is treated in another way; the weapons used are not pathos, satire, and invective, but bare and bitter statistics, sought for and collected from all the large cities in Europe, supplemented with a report of the New York Nursery and Child's Hospital, an institution with which Dr. Jacobi has for some years been prominently connected. Turn where we will, from these dry columns of statistics but one answer can be elicited, but one truth evolved. These figures, each unit of which represents an infant life,—and their number gives strength to their feeble voices,—bear testimony that in vain do we hope to violate with impunity that law of nature which demands that the infant shall draw its nourishment from the mother's breast. In vain has the brain of man conceived and put into execution legislative enactments, foundling-hospitals, and nurseries; in vain has Charity stretched forth her hand to strengthen the feeble hold by which the abandoned child clings to its tiny life; in vain has Science analyzed the maternal nourishment, and with cunning hand compounded in the laboratory "Food for Infants" which shall so nearly simulate that provided by Nature as to deceive even Nature herself.

Everywhere the same inevitable result, rendered emphatic by repetition, proves to us that the only method by which the lives of young infants deprived of maternal care can be saved is by substituting for the mother another, who, though venal, shall yet supply the food destined by nature for the child.

According to Wappäus, the ideal or normal rate of infantile mortality during the first year is about one-tenth of the entire number, and to the attainment of this result the efforts of all public institutions should be directed. Wasserfuhr, the latest worker in this field, writes, "If the mortality in these institutions exceeds twenty per cent., it must be considered *excessive*." Judged by this standard, how unsatisfactory are the results which our most zealous efforts have as yet attained! Those who wish for full information on the subject will find it in the pages of Dr. Jacobi's pamphlet; but let us, who have to grapple with this problem here at home, study the question as illustrated by this report of the New York Nursery, a charity which had its origin in response to the cry of the benevolent, "Show us the way, that we may give." The building is commodious, the ventilation admirable; the medical staff comprises men distinguished for their ability and conscientious zeal; and the management of the institution is intrusted to ladies, to whom the care of those "waifs of humanity" has been a "labor of love;" and yet Dr. Jacobi has shown that since 1870 there has been a death-rate of fifty per cent. in children varying in age from four months to two years. He humanely hesitates to calculate the probable death-rate if only new-born children had been admitted.

Such, then, are the results attained under circumstances the most propitious for the success of this system. How is it where the foundling-room is attached to a large general hospital, and the infant breathes an air contaminated by diseases and by emanations arising in consequence of insufficient cleanliness in the ward itself?

From our own experience in a large hospital, we must bear witness that, in spite of the untiring efforts of the medical staff, and of others in charge of the institution, the death-rate of those foundlings retained in the hospital has been, and still is, year after year, nearly cent. per cent.

Let us, then, look this question in the face, and recognize the fact that foundling-hospitals have been tried in the balance and found wanting. But one plan offers any hope of remedying this evil,—that, namely, of "boarding out" the infant in the country, under the supervision of local authorities, public or private.

The question of the possibility of this plan can only be answered by an experiment; suffice it to say that those who have given the subject much serious and anxious consideration maintain that it *is* practicable, and that the demand for homes will create the supply, and they are the more justified in entertaining this belief, because the enormous saving in expense, secured by the abandonment of costly institutions, will provide for the adequate recompense of those to whom the care of the infant is intrusted.

If this plan be judged inadvisable at present, this much, at least, can be done in large lying-in hospitals,

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where the number of foundlings is exceedingly small, viz., provision can and *should* be made for wet-nurses during the first three months of infant life, when the mortality is so excessive. Among those women who are the recipients of the benefits of these charitable institutions, some, by the death of their offspring, are left with full breasts, while in others the supply of milk is so bounteous that, without detriment to their own child, nourishment can also be provided to another. Let those for whom provision has been made by the community during childbed repay the debt to the children of the State, "*the orphans*," as the French law terms them, and by this means give the infant a chance, slight though it may be, in its "struggle for existence."

MEDICAL KNIGHTS.

MEDICINE has lost in the past year two of its most famous men, Sir James Y. Simpson and Albrecht von Graefe. One was knighted, but the other possessed no rank. The memory of both, however, will rest upon their labors alone, and they can well afford that it should be so. At the same time, every one will concede that to have been knighted was no more than Simpson's due, and it would have been an equally graceful acknowledgment of ability and extraordinary achievement had the King of Prussia conferred a similar honor upon one who had done so much in extending the national reputation as Von Graefe.

It is by no means certain that had Von Graefe been an Englishman his chances for knighthood would have been in any way improved. We do not remember the cause for which Sir James Simpson received his title. It may have been for the introduction of chloroform: we hope it was; but it is quite as likely to have followed attendance upon the royal family. It is to this latter class of services, indeed, that the medical men of Great Britain too often owe their elevation. It is true that being invited to attend a member of the royal family is an honor in itself. So that when Sir Henry Thompson informs us in the headings of his papers that he was "surgeon extraordinary to H.M. the King of the Belgians," he does so with just pride. But when he is dubbed knight for performing lithotripsy upon the king, we are led to infer that the honor is bestowed not so much in recognition of Sir Henry's position as a representative surgeon as in mere payment for services rendered. Knighthood, in sooth, is in itself a good fee. It strengthens one in the eyes of the publisher, as well as in those of the general practitioner. Plain Mr. Thompson might demand in vain fees which Sir Henry obtains without difficulty. But Sir Henry had already enjoyed the luxury of type, and, let us hope, had decided the point of provincial patronage and the theory and practice of compensation to his entire satisfaction, long before he had been called to Brussels. It remains a matter of doubt whether Sir Henry would have been recognized by royalty at all had not his patient been the queen's uncle. A dignity so bestowed can have but a limited value to the recipient, and can be at most a matter simply for congratulation. What we would ask for Sir Henry is a *real* honor, not a make-believe,—a recognition from a sovereign, not a gift from a patient.

Here in democratic America professional dignities have but a general interest. We can afford to be amused at the kind of payment Sir Astley Cooper received for removing a sebaceous tumor from the scalp of George IV.,—£500 and a baronetcy. We read of the simple-minded Charles Bell practising the court etiquette at home prior to his undergoing the ceremony of receiving his title, and regret that he could not have been allowed his professional honors in a more suitable manner. The possession of a title did not save Sir Richard Croft from suicide, nor the memory of Sir Everard Home from universal execration as the purloiner and destroyer of the Hunterian manuscripts. After all, no truly great man needs a title. We are really glad that Dickens declined a baronetcy, and that Jenner, Hunter, Goodsir, and Faraday escaped it.

It must be an agreeable thing, though, to become a knight for removing a sebaceous tumor, and many of us who put forth no claim to greatness would be willing to crush stone if knighthood were to be our reward. How many titles have Americans lost by being placed beyond the pickings of the flesh-pots of kings! Dr. Gunning, for example, for treating the fractured jaw of Secretary Seward might have become a member of the Guelphic order at least, while Physick, for performing lithotomy on Chief-Justice Marshall, would have been known to the present generation as Sir P. S. Physick, Bart.

TRANSACTIONS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting, held March 22, 1871, Prof. J. Aitken Meigs, President, in the chair,

DR. GOODELL opened the discussion by exhibiting Barnes' dilators, and a curved forceps, which he had devised for reducing them to the smallest compass and for introducing them into the os uteri. The pocket added to these bags was therefore not only unnecessary, but operated disadvantageously by increasing their bulk. After their introduction one finger should be kept upon the edge of the os, so as to be sure that they neither slip into the uterus nor into the vagina during the process of distention. He spoke at length of the advantage he had derived from these dilators in cases of tedious dilatation of the os, arising either from rigidity of the cervix, the early escape of the waters, or from contraction of the conjugate diameter, which prevented the head from bearing upon the soft parts. In abortion, when the membranes remain behind, they are invaluable, as well as in those cases in which convulsions set in at the outset of labor, before the os uteri is dilatable. In placenta prævia not only do these bags very effectually control the hemorrhage, but serve also to dilate the os, so as to facilitate the process of version. They are useful in arousing the uterus to action in cases of inertia not due to exhaustion. Finally, without pretending to enumerate all the puerperal conditions in which these bags are efficacious, the doctor thought the members of the Society would find them of great value in all cases of labor in which

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humanity or necessity demanded the speedy dilatation of the os uteri.

Dr. Eshelman asked Dr. Goodell whether he did not believe that in cases of placenta prævia the forceps could be introduced earlier, with an os less dilated, and delivery effected sooner by their use than by turning. This was his experience. He usually finds on arrival, or after tamponing and dilating with the colpeurynter, a free edge of the placenta, by the side of which he introduces the forceps, and by traction makes the head, as in natural labor, dilate the womb, and at the same time so compress the placenta and the open sinuses of the uterus as to prevent hemorrhage. He has never found fœtal life survive the first copious hemorrhage in central implantation, but in partial implantation the child may be saved.

Dr. Goodell, in reply to Dr. Eshelman, stated that in central implantation of the placenta he had designedly laid down the rule of *version* for the guidance of the general practitioner, because few resorted to the forceps before the os was fully dilated, and the child was usually lost, whatever the treatment. At the same time, he had repeatedly applied the forceps when the os could only admit the cone of his fingers, but deemed it a hazardous practice in placenta prævia. He objected to the forced introduction of the forceps, and to the forcible dilatation of the os uteri by subsequent traction on the head, as recommended by Dr. Eshelman in these cases, because injury might be done to the excessively vascular and hypertrophied cervix, whereby metritis or blood-poisoning would be apt to result, either directly from the damage sustained, or indirectly from the absorption of the lochia, which must then pass over an abraded surface. On the other hand, the pressure exerted by the bags was uniform, and so safely graduated that no such accident could possibly occur, while the physician is left free to resort either to the forceps or to version, as he may deem best.

Dr. Hamilton said the allusion by Dr. Goodell to cases of very slow and difficult dilatation of the os uteri, caused sometimes by insufficient antero-posterior diameter of the pelvis, or unusual size of the head of the child, suggested a case he had lately attended. The patient, about twenty years of age and well formed, had been in labor, when first seen, at 8 P.M., about twelve hours, during the latter half of which the pains had been very frequent and severe. It was the first parturition, and an examination, rendered difficult by the contracted condition of the external parts, showed no dilatation of the uterus, but, on the contrary, a remarkable narrowness of the os tincæ, the edge very thin, no vestige of the neck remaining; so that careful touching and some little time were required to determine its location. Regarding the case as one of perverted or irregular movement of nerve-power, rather than of mechanical difficulty, and with a view to afford some temporary relief of the fruitless suffering, or to effect some change in the condition of the uterus, a teaspoonful of the solution of morphia was given, with direction to repeat the same, if necessary, every hour, until three doses had been taken. Next day, at 4 A.M., he was sent for, and found on arrival that no change had occurred in the state of the uterus; but the pains had become frequent, and were gradually increasing in strength. At 9 A.M., found no change in the os tincæ, although the pains had increased in severity. A dose of castor-oil was directed. At 2½ P.M., he saw her again, and learned that the bowels had not been moved, the oil having been rejected, and on examination could scarcely determine whether a very slight relaxation had taken place or not. The pains had continued up to this time regularly and with increased power. A dose of magnesia was now given, with direction to administer, if necessary, in two hours an injection. Just before 6 P.M., made another visit, when he was informed the bowels had been well moved two or three times. On examining, he was surprised to find the head pressing upon the perineum, entirely without the uterus, and the external parts so perfectly relaxed as to promise a speedy delivery, which in fact took place in less than an hour afterwards. Thus it will be seen that the patient, after having suffered about twenty hours (during fourteen of which the pains were of extraordinary frequency and force) without a perceptible change in the condition of the parts concerned in parturition, was at length favored with so sudden and perfect relaxation as to permit the completion of this act in a space of time much shorter than is frequently required in cases pursuing a more normal course. Whether the action of the purgative was, in this case, the efficient agent in developing a more favorable movement of the powers pertaining to parturition, is not certain, although quite probable in view of the advantage so often obtained in similar cases by this means. A question of primary importance in this connection is the mode of determining the various causes capable of producing the persistent contractions alluded to, and the appropriate methods of management.

Dr. Goodell, in answer to Dr. Hamilton, remarked that in multiparæ his usual habit was to rupture the bag of waters so soon as the os was dilated to the size of a door-knob; but that it was often a very nice point to determine when to do so in the earlier stages of labor, especially in primiparæ. For instance, it was no easy matter to decide whether the cause of delay in the dilatation of the os was due to a large fœtal head, to slight contraction at the brim, to some other obstacle to engagement, or to either an excessive or a scant amount of the liquor amnii. In these doubtful cases he had adopted a plan which, although not infallible, had often served him a good turn. Whenever the os dilated slowly, he hooked down the cervix with one finger in the os; and if then, during a pain, the membranes did not bear firmly upon it, he argued that they were doing no good, and accordingly ruptured them. Again, if the membranes continued to remain so closely applied to the head as to be with difficulty appreciated, he invariably ruptured them. On the other hand, if he had drained off the waters under a mistaken idea that they were in excess, the error could be promptly rectified by the dilators, which were in fact more efficacious in expanding the os than even a well-developed bag of waters.

Dr. Eshelman thought that in Dr. Hamilton's case the thin rim was mucous membrane, as in a similar case he had found the muscular band above and more widely dilated. He was undecided as to the more desirable course, having tried both methods, yet he thought it was not likely that the uterus would be much affected by evacuating the waters when they were scanty.

Dr. Burns thanked Dr. Goodell for his very clear exposition. He had recently been very anxious with regard to a primipara, aged twenty years, with rigid os and vagina, who was taken with convulsions at three o'clock A.M., before the slightest dilatation had occurred. Her countenance became livid, her breathing stertorous, and she frothed at the mouth. Fearing death at so early a period in the labor, he commenced to dilate by means of one or two fingers during the intervals of pain, hoping to secure sufficient dilatation to admit the introduction of the forceps. After some time the os admitted the index finger. The convulsions continued at intervals, and were terrific. To save the brain, he opened a vein and took about twenty ounces of blood, keeping her at the same time under the influence of ether. In two hours there was marked progress, but the convulsions continued. She was again bled twenty ounces more, and he gave her one-third of a grain of acetate of morphia hypodermically. As the uterus was already dilating well, he gave more liberty of action to the uterus by rupturing the membranes. This was followed by greater descent of the head. The os, wire-like, encircled the head so closely that he was unable to introduce the forceps. Expulsive efforts now came on, and by the aid of the finger the os was pushed over the head. The forceps were then readily applied and the child delivered. The child was dead, and had probably died during the first convulsions. During her labor forty ounces of blood were drawn, twenty-four ounces of ether used by inhalation, and one-third of a grain of the acetate of morphia was used by hypodermic injection. She had fifteen violent convulsions up to the close of labor, none afterwards. On the third day after she was still unconscious of her confinement. Dr. Burns stated that he had used his fingers as dilators for thirty-two years, and successfully, but believes that he might have often succeeded better with the dilators mentioned by Dr. Goodell. In placenta prævia and abortions they would no doubt be useful by acting as hæmostatics as well as dilators. He said that probably Dr. Hamilton's case might be explained by the circumstance that the first stage of the labor was tardy and the second stage unusually rapid, which is sometimes the case.

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Dr. B. also spoke of a case of prolapsed bladder occurring in his practice a few years ago. The labor was advancing quickly, when an examination revealed a tumor filling the vagina, but no os could be detected. Ascertaining that she had not passed water for some time, and having no catheter, he finally obtained, after some difficulty, a quill from the wing of a turkey, from which a catheter was made, and the bladder evacuated. In twenty minutes delivery was accomplished. In placenta prævia Dr. Burns considered it difficult to deliver by the forceps; it required too much time. He always introduced the hand and arm, and delivered by turning.

Dr. Hamilton remarked that, in reference to the advantages of an earlier or later rupture of the membranes, he could not say much of a positive character. As a general rule, he was inclined to think a too early evacuation of the waters is recommended and practised. Wherever the membranes are very tough, they should at the proper moment be broken; otherwise the labor may be greatly protracted. The experience of members on this subject was desirable.

Dr. Buck said that Dr. Knight had used a solution of one part of Monsel's solution to four of water, throwing it directly upon the detached portion of the placenta, in placenta prævia, with a Davidson's syringe. He thought that Monsel's solution has also been found to control the hemorrhage absolutely in several cases which had occurred in the practice of other physicians in this city. In these cases the forceps should be applied as soon as possible and the child delivered.

Dr. Prall asked Dr. Goodell how he disposed of the placenta in a case of central implantation;—whether he delivered the placenta first, and then the head, or delivered the child through a rent made in the centre of the placenta, or pushed the placenta to one side and applied the forceps to the head. He was taught to turn and deliver in all cases, as soon as the hand could be introduced through the os past one side of the placenta, but would like to know which procedure would be considered good practice at the present day.

Dr. Goodell replied that before the introduction of the bags it would first be necessary to strip up the placenta from around the cervix as far as the finger would reach, in order both to make room for them, and also to facilitate the dilatation of the os, which would otherwise be much impeded by the presence of such a splint as the attached placenta. In placenta prævia he would rupture the membranes early, so that the head might bear firmly upon the cervix and compress the bleeding sinuses, resorting to the dilators if this plan failed; but in central implantation he would much prefer to leave the membranes intact and rely upon the dilators, lest a concealed hemorrhage should take place and a fatal amount of blood should replace the evacuated liquor amnii.

Dr. Taylor said that in the month of September, 1862, he was engaged to attend a patient during her second labor. For a few months previous she had had frequent but slight uterine hemorrhages, unattended, however, with pain. The period of utero-gestation would not expire until the next month, yet the hemorrhage came on so profusely, and was accompanied with so much pain, that, being alarmed, the patient sent for him. He found the os uteri dilated to the diameter of one inch, and covered with the placenta, which was bleeding with every pain. Having tamponed the vagina, he waited until he supposed the os was sufficiently dilated to introduce the hand, when he detached a portion of the placenta from the posterior lip of the uterus, discovered the membranes above, ruptured them, and found the hand and foot of a small child presenting. He brought down the feet and body, followed by the arms and head. During the labor he was obliged to sustain the mother by stimulants.* In rigid os, when wire-edged and the parts are tense and dry, the labor is always tedious. If the pulse is full, and a dose of opium does not relax it, he depletes, when dilatation generally occurs. He had tried the application of the extract of belladonna to the os, but considered it of no value. He did not often rupture the membranes, allowing them to act as dilators as long as possible. In one case, however, he found them so tough that he was obliged to cut them with the lancet. He had had no experience with Barnes' dilators; his fingers had always proved sufficient.

*This case is reported in *The American Journal of the Medical Sciences* for January, 1863.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

At a stated meeting of the Pathological Society, held Thursday, April 13, the President, John Ashhurst, Jr., M.D., in the chair,

Dr. Wm. Pepper presented the specimens from a case of *extensive invagination of the ileum, cæcum, ascending and transverse colon*, occurring in an *infant* six months old, which, during the last two months of its life, had taken, twice daily, in addition to the breast-milk, two teaspoonfuls of Nestle's Lacteous Farina in a gill or more of cow's milk. Dr. Pepper read a paper in connection with the subject, which will be published in full in a subsequent number of *The Medical Times*.

Dr. R. M. Townsend exhibited a specimen of *congenital multilocular cystic tumor*, which he had removed from the neck of a boy, aged ten years, from Iowa. When he was five months old, a blue spot about the size of a five-cent piece was noticed immediately above the centre of the right clavicle. This spot merged into a tumor which had so increased in a year as to fill up the side of the child's neck. This first tumor was pronounced an aneurism; and, compresses being applied, it disappeared.

The second tumor was first noticed by the mother when the child was one and a half years of age. Its growth has been somewhat irregular, since it appeared at times to diminish, then remained stationary, and at other times rapidly increased. Increase in bulk was especially noticed for a few weeks immediately preceding the operation.

The tumor was ovoidal in shape, lobulated, of the size of an ordinary orange, and was translucent by transmitted light. It was soft, elastic, fluctuated under pressure, and extended from the angle of the right jaw to within one inch and a half of the inner third of the clavicle. It overlaid the sterno-cleido-mastoid muscle, and extended from the inner edge of that muscle half-way to the median line of the neck.

On dissection, which was tedious from the close connections of the tumor, it was found to be seated beneath the platysma myoides muscle, and to involve the deep cervical fascia to such an extent as to require exposure of the fibres of the sterno-cleido-mastoid muscle, the carotid vessels, and the facial vein.

It contained about four ounces of straw-colored serum, and consisted of a multitude of cysts which freely communicated with one another. Its inner wall was highly polished, resembling serous membrane, and presented a columniform arrangement not unlike that seen in the cardiac auricles.

With the exception of a mild attack of erysipelas, the boy progressed rapidly to recovery.

Dr. S. W. Gross exhibited, in connection with this case, a number of photographs of cystic tumors.

Dr. J. H. Hutchinson presented the specimens from a case of *jaundice from compression of the ductus communis choledochus*, and read a history of the case, which will be published in the next number of *The Medical Times*.

Dr. Hutchinson also exhibited the specimens from a case of *recent peritonitis and pleurisy attending albuminoid spleen, liver, and kidneys*.

The patient, a factory-hand, aged sixteen, had been healthy up to his eleventh year. In his twelfth year he had noticed "lumps" on the side of his neck. On admission to the Pennsylvania Hospital there were cicatrices at the angles of both jaws, in both groins, at inside of left thigh, at junction of clavicle and sternum, and two immediately under left axillary space. Œdematous swelling of legs began two months before admission. Œdema of penis and scrotum was present on admission; also some ascites.

The urine was feebly acid, sp. gr. 1022, clear straw color, albuminous, and contained abundant hyaline casts: 32 oz. were passed in twenty-four hours. Subsequently the quantity diminished, but, infusion of scoparium being prescribed for him, it was again increased.

At the *post-mortem* examination the *cellular tissue* was generally infiltrated with serum; the *intestines* were everywhere agglutinated by recent cacoplastic lymph; the *liver* was enlarged in its right lobe, firm, and appeared mottled on the

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addition of iodine; the spleen was much enlarged, its tissue firm, and on section small whitish bodies were seen. The *kidneys* were enlarged, the left very much so, the tissue firm, the relation of cortex to cones normal: iodine produced mottling.

The specimens were referred to the Committee on Morbid Growths, who reported, April 28, as follows:—

"The specimens from the case of long-continued suppuration, presented by Dr. Hutchinson at the last meeting, have been carefully examined by your committee, and it was found that the kidneys, spleen, and liver all showed slight but distinctly recognizable traces of amyloid infiltration. In the kidneys it was principally the Malpighian corpuscles which were the seat of the deposit; in the spleen, the small arteries. In both these organs the iodine test gave a mahogany red to the affected parts, which subsequently turned to a purple, and finally black, under subsequent treatment with sulphuric acid. The intestines and stomach were, unfortunately, not preserved for examination."

Dr. S. W. Gross presented specimens illustrating *acute cystitis and pelvic cellulitis, consequent upon an attempt to crush a vesical calculus.*

A gentleman, seventy-one years of age, had suffered for eighteen months with symptoms of vesical calculus, of which the most distressing was the very frequent call to make water, he having been obliged to perform that act every half-hour. Examination with the sound and the finger in the rectum disclosed a stone, with fasciculated bladder and hypertrophy of the prostate gland, affecting more particularly the right lateral lobe, so that the beak of the instrument deviated to the left side of the patient. On the 30th of March, under chloroform, Dr. G. attempted to seize the calculus with the lithotrite, but failed to do so after gentle manipulations, which were not protracted beyond five minutes. The operation was attended with trifling hemorrhage, a full opiate was administered, and he was put to bed with hot bottles to his feet and fomentations over the hypogastrium.

Four hours subsequently the patient was seized with a chill, and he was unable to retain his urine, which was bloody, for more than fifteen minutes at a time. On the second day there was supra-pubic tenderness, with fever, great thirst, and a pulse of 120. On the following day there was some tympanites, with aggravation of the pain; the patient's face had a pinched expression, and was bedewed with perspiration. Up to the time of his death he continued to pass bloody urine every quarter of an hour, and his sufferings were intense. He sank exhausted on the morning of the fifth day after the operation.

The previous history of this case is interesting. During the latter part of September, 1867, the patient consulted Professor Gross on account of urinary calculus, which was readily detected by the sound; but the symptoms rather pointed to serious disease of the bladder and kidneys. He had a worn, emaciated appearance, his general health was much impaired, his appetite was indifferent, and his rest was disturbed. His sufferings were intense, notwithstanding the exhibition of anodynes, both by the mouth and by the rectum. He was obliged to pass his water very frequently,—sometimes every ten or fifteen minutes,—and, what is remarkable, as soon as he relieved himself he felt the same desire. The slightest pressure above the pubes gave pain, and the urine contained certainly one-third of pus and fibrinous material.

Under appropriate treatment, continued for three weeks, the symptoms were alleviated, and the quantity of pus passed was very greatly diminished. On the 12th of October Professor Gross performed the lateral operation of lithotomy. The perineum was deep, but the prostate gland was not enlarged. Two uric acid calculi, which weighed respectively 462 and 490 grains, were removed, and during the extraction of the second stone a prostate glandular tumor came away in the grasp of the forceps in advance of the calculus. Recovery was very slow; masses of lymph, encrusted with triple phosphates, frequently came away, and closure of the wound was delayed for upwards of two months.

The glandular tumor was round, of the size of a hazel-nut, dense, firm, and elastic, enclosed in a well-defined capsule of fibrous tissue, homogeneous in appearance, and homologous with the structure of the prostate gland.

Post-mortem inspection disclosed cellulitis of the front and sides of the bladder, which had extended up behind the recti muscles as high as three inches above the symphysis pubis. The bladder contained a uric acid calculus which weighed ten drachms. Its mucous coat was injected, and discolored brownish-green, and it was encrusted, particularly at the trigone, with patches of adherent fibrin. The muscular coat was somewhat hypertrophied, and presented a columniform appearance. Several sacculi also existed, one of which, seated just behind a point midway between the entrance of the ureters, contained a calculus of the size of a small hazel-nut. The orifice of this diverticulum measured about one-fifth of an inch in diameter. The right lobe of the prostate gland was enlarged to at least eight times its normal volume, and two mammillated sessile prominences were prolonged from it into the bladder. The posterior portion of the left lobe was converted into a pouch of an ounce capacity, the fibrous capsule of the gland alone remaining. The anterior portion of the lobe remained, but it was much hypertrophied. The ureters were dilated for several inches beyond their termination at the bladder, and the kidneys were greatly congested.

It is interesting to note in connection with this case the effect of the removal of the glandular prostatic tumor, a line of practice urged by Sir William Fergusson to relieve the distress of enlarged prostate. In an article contributed to the *London Lancet* for January 1, 1870, he says, "As the entire wound in lithotomy most generally closes by granulation, the very removal of such wellnigh isolated masses will leave less surface for inflammation, suppuration, and granulation. If allowed to remain, it is not likely that they will adhere to their former site by immediate union; if they do not, a larger surface must be exposed to the irritating influence of the urine, and a double suppurating and granulating surface must be left." These views are not borne out by the present example. A much larger surface was left for inflammation, granulation, and suppuration; and instead of the comparatively small cavity left by the removal of the growth having filled up, it progressively increased in size until a large pouch was formed, the existence of which doubtless increased the difficulty in voiding urine, besides aggravating the symptoms due to an inflamed bladder and hypertrophied prostate.

Dr. F. F. Maury presented *calculi, sacculated bladder, and enlarged prostate from a patient dying of peritonitis after the operation of lithectasy.*

Dr. H. C. Wood exhibited the *heart* and *pericardium from a case of pericarditis.*

Dr. W. J. Porter presented *enlarged glands from each side of the aorta in the vicinity of the liver, ulcer of the stomach, fatty liver, tumors of the uterus, cyst of left ovary.*

The specimens, through the kindness of Dr. Thomas Wistar, were obtained from an old woman seventy-seven years of age, and for several years past an inmate of one of the asylums in this city. No medical history could be obtained.

The post-mortem examination was made on the 27th of March, about twenty-four hours after death. On opening the abdomen, about eight or twelve ounces of serous fluid were found. The liver was of very peculiar form and very fatty in appearance. The gall-bladder was distended with gall-stones, and its walls much thickened. The glands on either side of the aorta were very much enlarged and apparently cancerous. The pancreas, in parts, was similarly affected.

At the pyloric extremity of the stomach a large, malignant-looking ulcer was found, but there was no thickening or obstruction of the pylorus. The kidneys and spleen were both healthy.

The uterus was normal in size; the cervical canal was filled with a thick, tenacious, colorless mucus. The cavity contained three small tumors—one, the larger, about the size of a large pea, attached to the right side by a rather thickish pedicle; the others, on the opposite side, much smaller, about the size of a grain of wheat, and without a pedicle. These tumors, before they were changed by the action of the alcohol in which they have been preserved, presented in a marked degree the characters of the cellulo-vascular vegetations described by Thomas in his work on "The Diseases of Women," in the article on Menorrhagia. On the posterior surface of the uterus, externally, two small tumors were found, one hard, and re-

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sisting the knife, the other easily cut; on the anterior surface, a little to the left side, another little tumor, fibrous on section, was found. The right ovary was apparently healthy. The left had a small cyst, the fluid contents of which readily disappeared into the ovary on pressure.

The specimens were referred to the Committee on Morbid Growths, who reported, April 28, as follows:

"The vagina and uterus have both undergone senile atrophy. The cavity of the uterus, which is sharply anteflected, measures two inches. This specimen illustrates the growth and development of the various forms of polypi of the uterus. Into the canal of the cervix there project numerous large Nabothian glands, one of which is provided with a short pedicle, while another is imbedded deep in the parenchymatous tissue, and forms a 'retention cyst' the size of a small cherry.

"On the posterior wall of the uterus are two broad, flat, slightly elevated portions, consisting of small cysts formed by the closure of the uterine glands, surrounded by a slowly proliferating connective tissue, presenting the form which has been compared by Virchow to molluscum as developed in the glands of the skin. Near the right Fallopian tube the growth has been more rapid, and a mucous polypus the size of an almond projects into the cavity, consisting of a conglomeration of small cysts, the largest of which is not the size of a pea. Under the microscope a delicate ground-work of waving bundles of connective tissue holds loosely together small cysts lined with an epithelium, generally pavement in character, but presenting great variety in shape and size. The supply of blood-vessels is abundant; the walls, however, of the arteries which ramify on the exterior of the growth (from which part alone the section was made) are very thin and delicate. The contents of the cysts consist of epithelium, colloid masses, pus cells, and detritus. The lining membrane has lost its character as a mucous membrane, and is smooth and glistening, closely resembling a serous membrane.

"On the posterior wall of the uterus there are two small fibroids, one of which has undergone calcification.

"Both ovaries are contracted by fibrous degeneration, and in the left several small simple cysts are found."

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

AT a meeting held January 3, 1871, the President, Dr. J. M. Toner, in the chair, DR. LOUIS MACKALL, JR., read the history of the following case of *rupture of the uterus,—delivery by turning, the child still-born, and death of mother:*

"Harriet ——, a stout, obese colored woman, gave birth, on the 9th of March, 1868, to twins. In August, 1869, she was delivered again of a still-born child, which was supposed to have reached 7½ months. On Thursday evening, December 28, 1870, labor-pains set in, but she did not call in a physician until Friday morning. At this time Dr. Appleby visited her; labor-pains feeble, and os uteri undilated; at 12 A.M. full dilatation of the os, but pains still weak; no material change until three P.M., when symptoms of exhaustion were manifest. Dr. Peter and myself saw the case between six and seven P.M. At this time she was in a state of collapse; pulse feeble and rapid; skin cold. Upon inquiry, she stated that she had had no pain since three o'clock, but complained of some tenderness when pressure was made over the abdomen. There was and had been no hemorrhage; but vomiting had set in at three o'clock, and was still persistent. On examination, the os was found completely dilated. The face was engaged in, but had not passed, the upper strait. It was very apparent that the conjugate diameter was very considerably less than normal, owing to a great prominence and jutting of the promontory of the sacrum.

"Turning was decided upon; and, accordingly, I passed my hand, without difficulty, by the side of the child's face, and found that the uterus was ruptured posteriorly. The feet of the child were reached without difficulty, and brought external to the vulva. The arms were also brought down, but great effort was required to pull the child's head through the contracted brim.

"The woman bore the operation better than could have been expected in her extremely prostrate condition. A teaspoonful of laudanum was administered, and stimulants freely given. Reaction took place during the night. Her pulse, on the following morning, was 120 per minute, and of good volume; the abdomen was greatly distended, and there was some tenderness on pressure; vomiting continued. Laudanum, in teaspoonful doses, every six hours, with brandy and beef-tea, was the treatment adopted.

"On Sunday, the third day, she was evidently much worse; pulse 138, and very feeble; countenance hippocratic; abdominal tenderness not marked. As everything, whether medicine or nourishment, was immediately vomited, ½ grain of morphia was administered subcutaneously, followed in four hours by another injection of ¼ grain; she had no further return of pain or vomiting, but she continued to sink, and at six o'clock P.M. died.

"A *post-mortem* was made by Drs. Appleby and Kleinschmidt sixteen hours after death. The abdominal cavity was found to be distended by fluid blood; the evidences of acute peritonitis were everywhere apparent. The uterus had not contracted, and a large rent, capable of allowing the passage through it of the child, was found in the posterior portion of the body of the organ. There was decided deformity of the pelvis: the conjugate diameter measured only three inches. The contraction of the antero-posterior diameter was found to be due to the great prominence of the promontory of the sacrum, and to a spinous ridge projecting from the os pubis."

After the reading of the paper, the following discussion ensued:

DR. LIEBERMAN asked the question, whether the life of the child might not have been saved by Cæsarean section.

DR. MACKALL believed the child to have been dead; authorities do not recommend the operation, under the conditions existing in the case as reported, unless delivery cannot otherwise be effected.

DR. J. P. THOMPSON, in considering the operation from a surgical point of view, thought that Cæsarean section involved less danger to the patient than turning, and was to be preferred even in the event of the death of the child. Section of the abdominal walls gave the opportunity for the removal of the coagula and *débris* from the peritoneal cavity, thus diminishing the chances of an unfavorable result. In turning, there was the additional danger of peritonitis from the injury done to the intestines in dragging the child through the rent in the uterine wall.

REVIEWS AND BOOK NOTICES.

INSANITY AND ITS TREATMENT: LECTURES ON THE TREATMENT, MEDICAL AND LEGAL, OF INSANE PATIENTS. By G. FIELDING BLANDFORD, M.D. Oxon., F.R.C.P.L., and Lecturer on Psychological Medicine at the School of St. George's Hospital, London. With a Summary of the Laws in Force in the United States on the Confinement of the Insane. By Isaac Ray, M.D. 8vo, pp. 471. Philadelphia, Henry C. Lea, 1871.

With so good a book before us as Dr. Blandford's Lectures, which, in an abridged form, were delivered at the School of St. George's Hospital, but, as Dr. Sibbald informs us, without clinical illustration, we cannot avoid being restive. Shall we *ever* be allowed careful scientific teaching of insanity? And we respectfully ask how much longer graduates, to the number of a thousand, will be turned out every March into the full practice of medicine, with but didactic ideas of mental disease? We have no record of the percentage of attendance upon Dr. Blandford's lectures, nor of the good results realized; but when we read, "I now publish them, with the hope that they may serve to some extent as a handy-book concerning insanity," we sincerely regret that the doctor could do no more for his students, and earnestly commend this book to them when their first clinical opportunity arrives in the care of a patient of their own.

A cordial welcome is due to Dr. Blandford's book, as being a most grateful addition to the literature of psychological medicine. The argument is well given in the preface: "The only method by which we shall attain an insight into the mysterious phenomena of unsound mind, is to keep ever before us the fact that disorder of the mind means

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disorder of the brain, and that the latter is an organ liable to disease and disturbance like other organs of the body, to be investigated by the same methods and subject to the same laws." The first two lectures are devoted to the most recent physiology of the healthy mind. We are told with familiar clearness that "infants are not born with ideas and knowledge. The brain they inherit, but their acquisitions must depend on its healthy working, and on their surroundings and opportunities of receiving ideas." Here we find suggested the entire range of mind,—its success or failure in intellect, emotions, or will, as well as the great powers of hereditary and social influence. The doctor discards the old division of mind into intellect, emotions, and will, and states that to feelings alone are all things due,—either intellectual, æsthetic, or religious. And his requirements for the healthy working of brain and nerve are such as send us to Lecture XVIII. on the treatment of insanity, and also to Lectures IX., X., XI., XII., which describe clinically certain cases coming to our notice in ordinary practice. The lectures upon the pathology and morbid appearances of insanity, in our Esquirol days, would have been invaluable to us. We should hardly have tried to classify some five hundred patients in a hospital for the insane, or so eagerly sought for the dislocated colon and so utterly failed. As we recall our struggles with delusions, illusions, hallucinations, etc., we feel how much the lectures upon the false beliefs and acts of the insane would have aided us!

A most valuable Lecture, XX., is entirely taken up with the examination of patients, both for their proper medical treatment and for legal purposes, and we desire to express our gratitude to Dr. Blandford for not giving us a definition of insanity as an entity, having in mind certain routine legal questions and well-remembered scenes in our courts. We feel confident, however, that, when cited as an expert, due respect is paid to his testimony.

That there are defects and imperfections in Dr. Blandford's "handbook" we perceive, but we can assure every one that most valuable hints may be obtained from it when called upon to treat insanity or to take reluctant steps for placing insane patients under legal restraint.

Although we should have preferred the shape and flexible cover of the Edinburgh edition in Mr. Lea's handsome American edition, we give him our thanks. The Appendix, by Dr. Ray, supplies a positive want, and is a happy thought.

MINNESOTA AS A HOME FOR INVALIDS. By BREWER MATTOCKS, M.D., President of the Board of Health, St. Paul. 12mo, pp. 200. J. B. Lippincott & Co., 1871.

SECOND ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS. Senate Doc. No. 50. January, 1871.

Although one of these volumes is written with the evident purpose of eulogizing a special climate, and the other is an official state paper, we may consider them together as giving an insight into the hygienic and sanitary conditions of two great and flourishing Commonwealths. Perhaps no more decided contrast could be furnished, as to age, geographical distribution, and general development, than the remote States of the East and West, the venerable Massachusetts and the youthful Minnesota. In the former, the Legislature two years since instituted a "State Board of Health," with the view of thoroughly systematizing sanitary statistics as they were recorded in the various towns, and of comparing them for purposes of general information and advantage. This plan might be adopted with benefit in other States, and we would then in time have a great national health-bureau formed from the separate State organizations,—a reliable congress of earnest co-workers in the great cause of human health. The questions discussed in the Massachusetts report are interesting to the people at large, and to physicians more than to any other class, such as lead-poisoning, trichiniasis, malignant vesicle, the health of towns, typhoid fever, alcoholic drinks, mortality, homes for the people, health of minors in factories, etc. We think it might be made a much more valuable document, if, instead of giving small disconnected paragraphs, many of which are of only trivial moment,—in regard to the health of towns, for example,—it would, another year, classify the information thus afforded, so that it may be definitely known whether the same general influences pervade large tracts of country and simultaneously affect the health of thousands. Quite an extensive correspondence with United States representatives abroad, and others, is included in this report, embracing many interesting facts relating to the use of stimulants in foreign countries.

The little volume on Minnesota devotes sixty-four pages to the causes, curability, etc. of consumption, before coming to the foregone conclusion that Minnesota is well adapted for its cure. "As we write," says the author, "we feel a certain enthusiasm in dwelling on a health-resort, bounded only by latitude and longitude, called by a soul-inspiriting name, 'the great Northwest.'" Dr. Mattocks remarks also that the climate of Minnesota is strictly a tonic climate, tonic in the broad full sense of the term; but as tonics sometimes irritate slightly, and we have perhaps for a few days to discontinue them, so with the climate of Minnesota. "And yet," remarks the writer, "why should the air be irritating? It is nothing but pure air; it is an air which is comparatively free from miasm, because we are so far north; it is free from fine particles of salt, because we are so far from the coast; it is free from moisture, for we are so far inland." We might be tempted to give some of the facts of local interest connected with this flourishing new State and its metropolis, St. Paul, but those who wish specific information will probably obtain the little work, which they will find a handbook of general and statistical knowledge in regard to this popular health-resort for consumptives.

ANNUAL REPORT OF THE SUPERINTENDENT AND PHYSICIAN OF THE NEW YORK STATE INEBRIATE ASYLUM at Binghamton, for 1870. Albany, 1871.

This report of Dr. D. G. Dodge is interesting to the profession on account of the general recognition at the present day of the fact that alcoholism is a positive disease, and not merely a habit. As such it is within control, its treatment being based upon a just appreciation of the effects of alcoholic poisoning on the system. Since the opening of this institution, May 1, 1867, 774 patients have been admitted; but the report neglects to state how many of these were cured or died. Of 220 cases admitted in 1870, the married and single were about equally divided; the youngest was 20 years of age, the oldest 75. We are sorry to see four physicians and one clergyman among the number. The Asylum seems to be excellently arranged and efficiently conducted.

PHILADELPHIA MEDICAL REGISTER AND DIRECTORY. Edited by JOHN H. PACKARD, M.D., Secretary of the College of Physicians of Philadelphia, 1871. 18mo, 334 pp. Philadelphia, Collins, Printer.

The profession at large is for the second time indebted to the care and industry of Dr. Packard for the issue of this valuable little work. We shall be glad to give it an annual welcome, as we believe its periodical appearance will speedily become a matter of absolute necessity. The changes in our hospitals, medical colleges, societies, etc., and in the addresses of our resident physicians, although seemingly slight and trivial at the moment, are in the aggregate of a year quite numerous and even important. A directory, therefore, soon falls behind the standard of complete accuracy, and needs rejuvenating at very frequent intervals. If we glance, for instance, over the pages of the first edition of this excellent manual of local medical history and statistics, published in 1868, we are forcibly struck with the alterations demanded on every page; and considering the work as one urgently needed by the profession, and admirably adapted to its wants, we believe, with the editor, that "a new edition, with the changes and additional matter rendered necessary by the lapse of two years, will meet with a like cordial welcome." While recommending Dr. Packard's Directory to every member of the profession here and elsewhere, in the State and out of it, as a volume rendered invaluable by its accuracy of details, completeness of local information, and usefulness for daily reference, a synopsis of its contents will afford the best idea as to its character. We find treated with every necessary minuteness the objects and characteristics, lists of officers, members, etc. of 13 medical associations, 9 medical schools and kindred institutions, 18 hospitals, 9 dispensaries, and 46 charitable institutions; and among the miscellaneous matters, to which nearly 150 pages are devoted, copious extracts from,

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and references to, all the State laws affecting physicians, the fee-bill adopted by the College of Physicians, the regulations of the Board of Health as to births, deaths, the morgue, etc., the requirements of the U. S. medical services, lists of dentists, nurses, etc., a directory of over seven hundred of our city physicians, with their office-hours, a list of members of every county medical society in Pennsylvania, etc.

BOOKS AND PAMPHLETS RECEIVED.

Obstetric Report of the Charity Hospital to the Medical Faculty of the University of Louisiana, etc. By James Jones, Jr., M.D., Chief Obstetrical Clinic, Medical Department, University of Louisiana. 8vo, pp. 4. New Orleans, 1871.

Beneficial Results from the Use of Mechanical Appliances in Pott's Disease of the Spine, illustrated with Cases. By John A. Wood, M.D. 8vo, pp. 29. New York, 1871.

The Glykogenic Function of the Liver. Extracted from an Introductory Lecture to the Class of the Pennsylvania College of Dental Surgery, November 7, 1870. By James Tyson, M.D., Professor of Physiology and Microscopic Anatomy, pp. 6.

A Treatise on the Medical Jurisprudence of Insanity. By I. Ray, M.D. Fifth edition, with Additions, 8vo, pp. xvi., 658. Boston: Little, Brown & Co., 1871. For sale by J. B. Lippincott & Co.

Proceedings of the State Medical Association of Arkansas. Pamphlet, pp. 87.

GLEANINGS FROM OUR EXCHANGES.

RINGWORM CONTRACTED FROM A PONY.—Dr. Tilbury Fox, at the meeting of the Clinical Society of London for March 10, 1871 (*British Medical Journal*, March 25, 1871), showed cases of extensive and severe ringworm of the arms and hands in seven men, in whom the disease had been contracted from a white pony whose body was studded over with patches of tinea tonsurans, having characters analogous to those seen in ordinary ringworm of the scalp. The disease occurred only in those men who had groomed the pony,—in three men brought to Dr. Fox by Dr. Drage, of Hatfield, and who were the ordinary grooms of the owner of the pony, and in four others, attendants of the Royal Veterinary College, where the pony had been sent for treatment. The patches of ringworm were chiefly in the front of the arms; they were large, more infiltrated than usual, and, in one case, markedly herpetic. In one of the other cases the central portions of the circular patches were studded with minute pustules. Dr. Fox attributed the severity of the disease to a large amount of fungus of a very luxuriant kind being sown at one time upon the arms of the men. In one man parasitic sycosis was produced. Hairs taken from the pony, exhibited under the microscope, were seen to be ensheathed in spores and mycelial threads, both of which invaded the shaft of the hair; and scales taken from a patch on the arm of one of the men were also placed under the microscope, and showed the mycelium of the fungus, which Dr. Fox pronounced to be the trichophyton, sprouting in all directions throughout the epithelial scales. Dr. Fox had never before seen the transmission of ringworm from the horse to man, nor had Professor Spooner in his forty years' experience; but an epidemic occurred some years ago among horses and mules in the valley of the Borne in Savoy, and was reported upon by Professor Papa, in which a disease similar to that in the present cases was observed to be communicated to man from the horse. Bazin had also noticed the same occurrence. He remarked, however, that the transmission of tinea from the ox and calf to man was common enough. The seven cases illustrated the fact that ringworm of the surface varies considerably in aspect, according to the amount and rapidity of growth of the fungus, from a mere erythematous desquamating patch (so-called parasitic pityriasis) to a pustulating surface resembling and liable to be mistaken for an eczema; the two extremes being connected by transitional forms, represented by an abortive herpes, a well-marked herpetic patch, or a desquamating circular area bounded by an herpetic edge; the occurrence of so much effusion as is necessary to produce herpetic vesicles being dependent upon the amount of irritation set up. Veterinarians who asserted that "ringworm" was common in the horse, and might be communicated to man, had not brought forward any proof that the disease which they styled "ringworm" was really parasitic, and he had no doubt that many non-parasitic eruptions of animals were classed under that term. The disease in the white pony referred to was, as proved microscopically, undoubted tinea tonsurans. Dr. Fox replied to Mr. Erichsen, that there is no difference in the character of the fungus in man as compared with that of the horse, except that in the latter it is more luxuriant.

THE USE OF ACETATE OF POTASSA IN THE PRESERVATION OF MICROSCOPIC SPECIMENS. MAX SCHULTZE (*Archiv f. Mikros. Anat.*, Jan. 1871).—Among the various fluids which have been employed for the preservation of microscopic specimens, glycerin, either pure, or mixed with other ingredients, is the most widely used. Though undoubtedly of great value, it has decided disadvantages. For instance, many tissues when preserved in it become so excessively transparent that it is with difficulty that they can be distinguished; while, on account of its tendency to form compounds with the fats, we can no longer avail ourselves of the difference in the refractive power of the tissues depending upon the amount of fat which they contain, as a means of distinguishing the one from the other. Since osmic acid has been employed so successfully as a means of preserving the most delicate structures, a new objection has been brought forward against glycerin. If a mere trace of the osmic acid remains in the specimen which is to be preserved, the glycerin under the thin cover turns black, the discoloration beginning in the immediate neighborhood of the preparation, but gradually extending throughout the entire fluid. As there is no method of thoroughly removing the osmic acid from the tissues,—even washing them in water for several days having failed,—the preparation, unless transferred, gradually becomes absolutely useless.

Under these circumstances Max Schultze made a series of experiments to find some preservative fluid which would be free from these objections.

Doppel had employed for some years past a saturated solution of the acetate of potassa in the preservation of botanical specimens for microscopic demonstration, and had suggested its possible value as a medium in which animal tissue could be successfully preserved. This hint was acted on by Max Schultze, and for the past two years he has employed a saturated solution of the acetate of potassa with great success. The microscopic section is first placed in water or serum, and examined. If found to be worth preservation, a drop of the strong solution of the acetate of potassa is allowed to flow under the thin glass cover, which is not removed. After twenty-four hours it will be found that the solution of the salt has replaced the water which has evaporated, and the preparation is now ready for the cement. The fluid, however, does not evaporate or crystallize, so that it may be left without danger several days before finally sealing it up with the cement. This solution has nearly all the advantages of glycerin as a preservative fluid, and is not open to the objections which have been mentioned above. It has been employed for more than two years in Prof. Schultze's laboratory, by himself and his students, and is most warmly recommended by him to all those interested in microscopy.

SOLUTION OF SANTONIN.—Dr. John Harley (*The Practitioner*, Feb. 1871) gives the following formula for a solution of this ordinarily so insoluble remedy:

℞ Santonini, in pulvere, gr. xij
Sodæ bicarbonatis, gr. xx;
Aquæ destillatæ, ʒiij.

Put the soda and water into a flask, keep the fluid near the boiling point, adding, as it disappears, about two grains of the santonin at a time, until the whole is dissolved. Solution is effected in about half an hour, during which time the water is reduced to ʒij. If need be, reduce by boiling to this bulk, when ʒi will contain a full dose,—six grains of santonin. If an alkaline reaction be objectionable, neutralize with acetic acid.

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TETANUS SUCCESSFULLY TREATED BY HYDRATE OF CHLORAL.—Dr. W. B. Cluness reports in the April number of the *Pacific Medical and Surgical Journal* a case of tetanus in which recovery followed the use of chloral. The disease was at first thought to be idiopathic, the symptoms having occurred shortly after the patient, who was perspiring and exhausted at the time, had taken a cold bath; but, upon careful examination, a ragged-looking sore, fully an inch in length, was found on the third finger of the left hand. After he had taken his third dose of eight grains, "the spasmodic contractions had, for a brief period, nearly ceased, and the tonic rigidity of the whole muscular system became perceptibly relaxed." Sleep was also produced by it, and the pulse fell from 128 to 88. The symptoms, upon their return, were again relieved, and the disease apparently was under the control of the remedy.

RETENTION OF PLACENTA.—Dr. Rossi states (*Ungar. Med.-Chir. Presse*, No. 47, 1870; from *London Lancet*, Feb. 18, 1871, p. 236) that in those cases of retention of the placenta where removal—especially after abortion—is impossible, he injects perchloride of iron into the uterus,—equal parts of water and the perchloride of iron. The placenta comes away piecemeal after such injections.

MISCELLANY.

THE American Medical Association met at San Francisco on Tuesday, May 2, the President, Dr. Alfred Stillé, of Philadelphia, in the chair. The delegates, of whom between 300 and 400 were in attendance, were welcomed by Dr. Starr, of San Francisco.

A full account of the proceedings has not yet reached us; but the telegraph informs us that the subject of the admission of Female Delegates, although none were in attendance, gave rise to a lively discussion, which was continued until eleven o'clock on Friday night, when the meeting adjourned, leaving the question still unsettled. On Saturday the Association went upon an excursion down the Bay of San Francisco.

Dr. Henry A. Martin, of Boston, Chairman of the Committee on Vaccination, was removed for using insulting language towards the Association in an article on Vaccination which he published in *The Homœopathic Journal.*

The first prize was awarded to Dr. E. R. Taylor, of Sacramento, for an essay on the "Chemical Constitution of the Bile," and the second to Dr. Benjamin Howard, of New York, for an essay "On the Direct Method of Artificial Respiration for the Treatment of Persons Apparently Dead from Suffocation, from Drowning, or from other Causes."

The following officers were elected for the ensuing year:—

President.—D. W. Yandell, M.D., Ky.

Vice-Presidents.—Thomas M. Logan, M.D., Cal.; C. Lives, M.D., Ala.; R. M. Mitchell, M.D., Ala.; J. K. Bartlett, M.D., Wis.

Assistant Secretary.—D. Murray Cheston, M.D., Pa.

Librarian.—F. A. Ashford, M.D., D. C.

Treasurer.—Casper Wister, M.D., Pa.

The Association will meet next year in this city.

APPOINTMENTS.—D. Hayes Agnew, M.D., Professor of Clinical Surgery in the University of Pennsylvania, has been elected Professor of the Principles and Practice of Surgery in the same institution, to fill the vacancy created by the resignation of Professor Henry H. Smith. It is understood that Dr. Agnew will continue, as heretofore, to deliver the lectures on clinical surgery.

Frederick D. Lente, M.D., has been appointed Professor of the Diseases of Women and Children in the medical department of the University of New York. This divides the chair hitherto occupied by Prof. Charles A. Budd.

Mr. Matthews Duncan has been elected one of the consulting physicians of the Royal Edinburgh Hospital for Sick Children.

METEOROLOGICAL.—The month just passed proves to have been the warmest April on record in this vicinity since 1790. The mean temperature of the month was 58.15° F., while the average of the means since 1790 has been only 51.35°, and since 1825 only 52°. On the 9th the thermometer attained a higher elevation, 85.5°, than during the corresponding month in any year at least since 1841. The lowest mean temperature on record for April is 44 degrees in 1794 and 1798.

During April an unusually small quantity of rain fell, measuring in the aggregate only 1.82 inches, nearly one-half of the whole having fallen on the afternoon of the 27th. The average rain-fall of the month during the past thirty-four years has been 3.86 inches.

THE WARREN PRIZE.—We are glad to learn that the Warren Prize has been awarded to Dr. H. C. Wood, of this city, by the Physicians and Surgeons of the Massachusetts General Hospital, for a memoir on Nitrite of Amyl.

DEATHS OF PROFESSORS WAGNER AND NIEMEYER.—From the *British Medical Journal* we learn that among the victims whom the medical profession has furnished in connection with the recent Franco-German war, have been two men of more than common note,—Professor Albrecht Wagner of Königsberg, who died at Dole on February 15, and Professor Felix von Niemeyer of Tübingen, who has died lately at Nancy. The cause of death in both cases was typhoid fever, contracted in the discharge of their duty. Dr. Wagner was well and favorably known in Germany for his works on Resection and Regeneration of Bone (translated a few years ago by the New Sydenham Society), on Hydrophobia, Diabetes in connection with Carbuncle, Resection of Nerves, etc. The name of Felix von Niemeyer is well known among us through the translation of his excellent *Text-Book of Practical Medicine*, and his *Lectures on Phthisis.*

MORTALITY AMONG INFANTS.—At a meeting held in New York to effect a reorganization of the Infant Asylum and Foundling Society of that city, Dr. Willard Parker gave some interesting statistics. Among the 35,000 births annually in this city, about 2500, he said, are illegitimate, and about 3000 children are thrown away to be destroyed or got rid of in any way whereby the individual can be saved from the law. Out of 25,167 deaths in 1869, 7405 were of persons under one year of age,—equal to 27 4-10 per cent of all the deaths, and in 1870 to 31 per cent. In the Foundling Asylum at Montreal, out of 4059 received, 3767 died, or only 7 per cent. lived one year. On Randall's Island they save 10 out of every 100 when reared by hand, but with nurses 27½ per cent. are saved. When nursed by the mother, 70 per cent. are saved, while in rural towns 88 per cent. survive. From this Dr. Parker argued in favor of the country as the place to locate the Asylum, and against the separation of the child from its mother.

A NEW HOSPITAL for children has been established in New York City, under the auspices and care of the Sisters of St. Mary of the Episcopal Church. Drs. F. D. Lente, W. H. Carmalt, and Robert Watts are the attending physicians.

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THE EDINBURGH PRIZES.—An Edinburgh prizeman writes to the *British Medical Journal* with reference to the prizes which it is announced were recently awarded to the female medical students at Edinburgh. As the paragraph in question was copied into *The Medical Times*, we also give the correction:

"In your impression of the 8th inst. it is stated that certain ladies gained prizes at the Medical School in Edinburgh at the close of the past session. This is quite true; still, I think the paragraph may mislead some of your readers not knowing the whole facts of the case. Dr. Watson, in his junior surgery class, gave separate prizes to the male and female students; so that the prizes gained by Isabel Thorne and Matilda C. Chaplin were competed for only by their female friends. In no competition with the males did the lady students succeed in obtaining a prize."

THE FRIENDS OF SMALLPOX.—It appears that a Mr. Henry Clark, who was committed to jail for fourteen days for non-compliance with the Vaccination Act, at Derby, in England, was received on his release from prison by bands of music and several thousand people with a large red flag carried in front. The *British Medical Journal*, in commenting upon this, says, "It is almost a pity that these several thousand cannot be allowed the luxury of a separate encampment, and of an epidemic of smallpox all to themselves. After a short time, we fear, the bands of music would be hushed, and the strong speeches take a different turn. We are just now suffering, in this and several great cities, a plague of smallpox, which we largely owe to the enthusiasm of the 'anti-vaccinationists.' If they would organize an isolated community for the voluntarily unvaccinated, and separate themselves from people who neither desire to infect others nor to be infected with that pestilence, it is possible that the smallpox and its friends would be in a short time simultaneously extinguished."

A NEW WORK BY PROF. JOSEPH JONES.—We learn with pleasure that Dr. Joseph Jones, Professor of Chemistry in the Medical Department of the University of Louisiana, is about to publish a work containing, in addition to other matter, "The Results of the Investigation of the Diseases of the Confederate Army during the American Civil War." The work will be issued as soon as a sufficient number of subscribers has been obtained.

A MOVE IN THE RIGHT DIRECTION.—Under this head the *Boston Medical and Surgical Journal* has the following excellent remarks:

"In our own practice we are constantly cognizant of cases of malpractice on the part of apothecaries who overstep the bounds of their legitimate business. That a pharmacist occupies a corner store in a crowded locality, and enjoys a local repute as a 'Doctor,' is no reason that he should treat venereal diseases, surgical injuries, and supposed constipation, or prescribe for 'the chiel who is a little ailing,' but may be on the threshold of serious disease. It is true, the patient, who may have but little money in his pocket, gets his advice for the price of the medicine administered, but the remedy is often dearly paid for by aggravation of disease, when a moderate fee to our younger brethren would secure sound advice and a satisfactory cure.

"We cannot help calling the attention of our friends the apothecaries to a sign we have just seen conspicuously posted in the shop of one of their own number. It is not for our sakes alone, but for their own good, that we advise them also to set up as a public notice,—'We are pharmacists, but not physicians; we dispense medicines, but do not prescribe for diseases;' and when they have done so, we trust they will keep to their own legitimate calling, and allow physicians to *treat* diseases."

DESIRABLE AMITY.—There seems to be in Great Britain, and we believe there is in this country, an excellent understanding between the medical services of the army and navy. The *Medical Press and Circular* of March 8 has the following:—"The *United Service Gazette* understands that the Admiralty have obtained the concurrence of the War Office to the naval medical students' attending the Army Medical School at Netley. There will be very little extension of the present building accommodation necessary; but the staff of professors, which is mainly composed of army medical officers, will be of course augmented, as the extra burden of instructing the naval students would be too great for the existing staff."

Again, in the *British Medical Journal* of March 11, we find that "on the occasion of the funeral of the late Army Assistant Surgeon, Count Wollowicz, the captain commanding H. M. S. *Hector*, in Southampton Water, offered to send a firing-party of marines, as he was aware that no means of paying this last mark of military respect to the deceased existed at Netley. The offer was accepted. Several of the naval officers also attended the funeral."

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending Apr. 29.	May 6.
Consumption	44	34
Other Diseases of Respiratory Organs	35	32
Diseases of Brain and Nervous System	44	35
Diseases of Organs of Circulation	19	23
Diseases of Abdominal Organs	22	26
Zymotic Diseases	28	23
Debility	20	16
Marasmus	8	6
Old Age	8	9
Cancer	3	1
Scrofula	3	0
Tetanus	2	2
Stillborn	9	19
Intemperance	0	1
Casualties	10	5
Unclassifiable	9	10
Unknown	5	6
Totals	269	248
Adults	148	150
Minors	121	98

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 19, 1871, TO MAY 4, 1871, INCLUSIVE.

MILLS, MADISON, SURGEON.—By S. O. 86, Headquarters Department of the East, April 26, 1871, assigned to duty as Post-Surgeon at Fort Columbus, N. Y. Harbor.

IRWIN, B. J. D., SURGEON.—By S. O. 77, Headquarters Department of the Missouri, April 27, 1871, assigned to duty at Fort Riley, Kansas, as Post-Surgeon.

STERNBERG, G. M., ASSISTANT-SURGEON.—By S. O. 86, c. s., Headquarters Department of the East, relieved at Fort Columbus, N. Y. Harbor, and to report for duty to the Commanding Officer, Fort Hamilton, N. Y. H.

WINNE, C. K., ASSISTANT-SURGEON.—By S. O. 90, Headquarters Department of Dakota, April 27, 1871, when relieved at Fort Ripley, Minn., by A. A. Surgeon Lord, U.S.A., authorized to avail himself of the leave of absence granted him in S. O. 23, c.s., Headquarters Military Division of the Missouri.

BREWER, JOHN W., ASSISTANT-SURGEON.—By S. O. 68, Headquarters Department of the Missouri, April 15, 1871, assigned to duty at Fort Larned, Kansas.

MIDDLETON, P., ASSISTANT-SURGEON.—By S. O. 86, Headquarters Department of the South, April 20, 1871, assigned to duty at Elizabethtown, Ky., as Post-Surgeon.

MILLER, G. McC., ASSISTANT-SURGEON.—By S. O. 83, Headquarters Department of the South, April 21, 1871, assigned to duty at Montgomery, Ala.

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THURSDAY, JUNE 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE USE OF EARTH AS A DRESSING IN SEVERE BURNS.

BY ADDINELL HEWSON, M.D.,

One of the Attending Surgeons to the Pennsylvania Hospital.

GENTLEMEN: Although I have already occupied a considerable portion of the time during which you have been attending my clinics in the exhibition and the discussion of the advantages of earth dressings for various conditions, I do not know that it is necessary for me to apologize to you for my intention to occupy a whole hour to-day in the consideration of the use of earth in severe burns. For, in the first place, the very special interest which you have all displayed in the cases exhibited under such treatment heretofore is certainly sufficient to justify me in the idea that you are not weary of seeing them; and, in the second place, it is only in my wards that such dressings are used, and I wish, therefore, to give you every facility of seeing them and of judging for yourselves of their true value. Furthermore, the very class of cases to which I wish specially to direct your attention to-day, as to the advantages of the earth dressings, is unfortunately terribly on the increase: I refer to burns of the third and fourth degrees, according to Dupuytren's classification, —that is, burns which, involving a greater portion of the thickness of the skin, are certainly the most painful of all such casualties. These, of late years, have increased at an enormous rate, owing, it would seem, to the very general use which is made of coal-oil by the humbler classes as a means of light. This oil produces, when burning on the body, a much deeper destruction than follows the burning of camphene, which was formerly used. The latter is far less tenacious, and very volatile, and therefore usually produces a burn of the first or second degree; whereas you seldom see an injury from burning of coal-oil in which there is not destruction to a much greater depth. I am confident that if our records in this hospital were sufficiently definite this point could be demonstrated beyond all doubt. As it is, they furnish strong presumptive evidence in support of this view. A few years ago I was strongly impressed with the idea that the character of burns *then* admitted to this hospital was much more severe than it was when I first became familiar with its wards, nearly twenty-five years ago; and examining our books of admission and discharges, I ascertained two facts which, I think, may be fairly taken as confirmatory of that impression. These are, first, the great increase of mortality from "burns" there recorded as having occurred in this hospital in the last fifteen years—that is, since coal-oil came into general use—over what occurred in the fifteen years previous, the difference being actually such as to double the mortality; and secondly, the increased mortality in the last fifteen years was confined essentially to women and children. The first fact, I would argue, indicates an increased seriousness in the character of such injuries; and the second, that the increase has been in the class most liable to casualties at home. Furthermore, the difference between the two periods is well defined. Up to the time at which we can fix the introduction of coal-oil into use in Philadelphia, the mortality in this hospital from "burns" had been each year about the same, whereas, since then, it has, up to within four years, steadily increased. We have, then, so far as I can see, no other means of explaining these facts. The terrible character of the injuries inflicted by this article, when ignited, you will have a fair opportunity of witnessing in two of the cases which I shall present to your notice to-day. These two cases, having been subjected to the ordinary treatment during the greater part of their sojourn here, furnish us with some of the material for the contrast which I purpose making between such treatment and that with the earth dressings. Before exhibiting them to you, I shall, however, bring forward a case which has been treated throughout with the earth.

Case I.—Was admitted four weeks ago last evening. She is, as you see, a stout, hearty-looking woman. She weighed, at the time of the accident, over two hundred and twenty-five (actually 227) pounds. She was then cooking at a range, and, leaning over the fire, her hair fell down, and, reaching into the flames, ignited, and burnt her very severely, not only about the neck and face, but on both hands, forearms, and arms, and right breast. No doubt, the greater part of the injury was caused by her endeavors to extinguish the fire in her hair. She was admitted to the hospital a few hours after the accident. The burns on the head involved the forehead, both cheeks as far forward as the malar prominences, the chin, lips, and ears. These burns were of the first, second, and (in some places) third degrees. The whole of the hand, two-thirds of the flexor surface of the forearm, and two spots of about two inches in diameter on the arm of the left side, were burnt fully to the third degree. The dorsum of this forearm, and half of this arm, were all vesicated, constituting burns of the second degree. The injuries to the right upper extremity involved the hand (almost, but not quite, its whole surface) to the third degree; the thumb, index, and little finger, to the fourth degree; more than half the circumference of the forearm, towards the inner side, and its whole length, to the third and fourth degrees; and the inner surface of the arm, more than half its length, to the same depth. There was also a burn on the right breast, evidently a deep one, and one on the shoulder of that side. The burns on the neck involved, within three inches, its whole circumference and its whole length, and varied in degrees from the first to the fourth.

The earth was applied immediately after the patient's admission. On the face, forehead, and ear it was applied as a powder or a paste, and allowed to dry without any covering to retain it in situ. The scabs or crusts so formed were never disturbed, and fell off of their own accord within the first two weeks, leaving no trace, in the form of cicatricial tissue, of the injury which had been received. You can see, on close inspection, three different tints of redness in the face, indicative of the three different degrees of burning which the parts there had sustained. Those of you who are near enough can, by feeling, satisfy yourselves that there is not a trace of cicatricial tissue to be found there. The skin now covering the points which were burnt is as soft and pliable as that on any other part of the body.

This patient's arms, forearms, hands, breast, shoulder, and neck were dressed with the clayey earth, spread in the condition of a thick paste on strips of bandage, and so applied after the method of Scultetus, the burnt surfaces having been previously dusted with the powdered earth. This dressing was then covered with plain blue tissue-paper, and all retained by spiral bandaging.

On the following morning, when I saw her for the first time, she expressed herself as being free from pain in the burnt surfaces, except at a number of points where, as was before mentioned, the injury sustained was of the first and second degrees; and I at once surmised, from past experience in these cases, the cause of the pain,—namely, the vesications which had formed since the dressing was put on. The removal of the dressings proved this to be the case, for in every instance where she designated the seat of this special pain we found a large bleb filled with *coagulated* lymph. These blisters I

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opened freely, and covered with the dry powdered clay, which instantly removed the burning pain. The dressing was then reapplied, and the patient expressed herself most emphatically as entirely free from pain. On the next morning, however, she had a good deal of complaint to make, and urged me to apply "linseed-oil and lime-water," as it would cause her less pain, and heal her burns up at once. I was confident, from this circumstance, that she had been tampered with. The removal of the dressings showed that the sloughs were beginning to separate; and in some places the hard crust of the earth and dead tissue could be seen to occasion her acute pain as it was drawn off without previous moistening. I therefore used water for the first time; and washing off the balance of the dressing, made it quite evident that her sufferings were from the dressings having got too dry. Consequently, when I put them on again, that morning, I used waxed blue paper on both extremities as an envelope, in place of the plain paper. The next morning she stated that she had been entirely free from pain, and admitted that her complaints the day before were exaggerated, and had arisen chiefly from some one telling her that I was not using the best dressing for her condition. On opening the dressings this morning, there was distinctly perceptible that peculiar odor which you have often had the opportunity of noticing where the earth has been twenty or more hours in contact with sloughing tissue. It resembles more the odor of *salt marshes* than anything else I know of. It is due to the earth becoming saturated with the *elements* of the disintegrating tissues, and is the only odor ever perceptible where the earth dressings are used, and then only when the earth is quite saturated with the discharges.

The covering with waxed blue paper was continued until the tenth day, when all the sloughing and dead tissue had come away.

Up to the fifteenth day the discharges from the right arm were always sufficient to penetrate the dressings in the course of the twenty-four hours. On that day it was noted for the first time that no discharge had escaped through the dressings, and measurements across the ulcerated surface at its widest points—1½ inches above the styloid at the wrist, and 2 inches below the bend of the elbow—were respectively 2¼ and 2½ *inches less* than they were the day before. The limb was washed on these mornings only on purpose to take these measurements with accuracy.

Two days later, although some discharge had penetrated through the dressings of this same arm,—which you will remember was the worse injured,—it was noted that "a band of healthy skin 1½ inches wide had formed across the wrist." The earth was picked and washed cleanly off, to make this perfectly evident, before the measurements were made.

With the left upper extremity we had even more rapid progress; the sloughs not only separated very promptly, but the ulcerated surfaces left by their separation on the eighth day (after the injury was inflicted) were then thoroughly dusted with the dry earth, which crusted on them, and remained there perfectly dry, except at four minute points, until the eighteenth day (April 2), when I washed the limb for the first time since the eighth day, and revealed the surfaces completely healed, and covered by healthy skin, with the exception of three small points between the fingers, and a small ulcer, the size of a half-dollar, at the wrist. The earth dressings were reapplied to these points for two days longer, and on their removal then, it was found that the whole of the extremity was healed. The progress in the right limb continued steadily; and, that you may judge of its rapidity, I will read to you the note of yesterday: "A bridge of skin has now (*i.e.* within twenty-four hours) formed across the ulcer at the bend of the elbow, leaving a granulating surface on the forearm four inches long." Now look at the size of that ulcer: it is but little over two inches in length, and by the same rate of progress will be entirely covered in the next twenty-four hours. These two ulcers on this limb, the one on the breast, and the one on the shoulder—all about the same size—constitute all that is left of the original injury, which you must remember was inflicted on this woman only twenty-eight days ago last night.

The result in this case is certainly one of the most satisfactory, if not the most extraordinary, that it is possible to conceive of. Her burns, most of them of the third and fourth degrees, which, as a rule, heal with ugly cicatrices, maiming and disfiguring the patient for life, have healed by the most satisfactory of all reparative processes where there has been loss of tissue,—namely, by "*scabbing*." Her face, neck, and left upper extremity present the most perfect specimens of this mode of healing it has ever been my fortune to witness. On many parts of the left limb you can observe (as also on the right) the *scabs* which have been formed by the clay; and as I peel these scabs off, you can see the new skin beneath, perfectly soft, pliable, and entirely free from all trace of nodular tissue. It is as thin as the skin in any other part of her body.

While on this point, I will read to you from Holmes' *Surgery* what Mr. James Paget says on this mode of healing,—and he is the highest of all authorities:

"*Healing by scabbing*, or under a scab, is the most natural and, in some cases, the best of all the healing processes. Very commonly in animals, if a wound be left wide open, the blood and other exudations from it dry on its surface, and, entangling dust and other foreign bodies, form an air-tight and adherent covering, under which scarring takes place, and which is cast off when the healing is complete. The exact nature of the process has not been watched; but it seems to consist in little more than the formation of cuticle on the wounded surface; and it has the advantage that, as no granulations are produced, there is little or no contraction of the scar. In man the same process is less frequent; it is more apt to be spoiled by inflammation, producing exudations under the scab, which either detach it or prevent the healing of the surface beneath it. Sometimes, however, the blood shed from a wound coagulates and dries on it, and, remaining as a scab, permits healing under it; or, if this do not happen, a similarly effective scab may be formed by the serous fluid or lymph by which the surface of an exposed wound usually becomes glazed; or, more rarely, the pus of a granulating wound may scab over, and sound healing take place beneath."—*Holmes' Surgery*, vol. i. p. 587.

Those of you who have been constant in attendance on my clinics can certify to the accuracy and clearness of all that has been said by this eminent authority, with possibly one exception, namely, his statement that, "as no granulations are produced, there is little or no contraction of the scar," which would seem to intimate that a granulating surface must always, even when healing under a scab, result in a contracted scar. The case before you flatly and positively disproves such an idea. For we have, on the face, neck, and the whole left upper extremity, the most convincing proof that although these surfaces were, twenty days ago, in a granulating condition, not the slightest trace of a contracted scar is to be found there to-day.

This patient, I freely admit, has had everything in favor of a good result, so far as her general condition is concerned. She was at the time of the accident in the enjoyment of the best health, and in the most admirable state of nutrition. But those of you who visit the wards with me, and saw her the morning after her admission, know that she sustained a terrible injury,—of which she even now presents sufficient evidences.

To prove to you that similar results, although of course not so perfect, can be obtained in patients in

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quite an opposite state as to general health, I will now show you another case:

Case II.—This patient is thin and emaciated to an extreme degree,—with complexion, skin, hair, and teeth showing that her general condition must have been of the worst kind long before she met with her injury. She is a widowed woman, fifty-four years of age. Lost three children in their infancy, and has two living.

On the evening of the 26th of January (eleven weeks ago to-morrow) she stumbled and fell whilst descending a flight of kitchen stairs with a lighted coal-oil lamp in her right hand. The contents of the lamp, in an ignited state, ran over the right upper extremity, shoulder, side of chest, neck, face, and head, destroying most completely the integument (to the third and fourth degrees) from about two inches above the wrist to the crown of her head. The hand was badly burnt, but most of it only to the second degree. Her left hand was also burnt to the same (second) degree. She was immediately conveyed to the hospital, where her injuries were dressed by the resident physician of the ward with oxide of zinc ointment. This treatment I did not change when I took charge of the ward on the 1st of February. Under it both hands (burns of the second degree) were completely healed at the end of four weeks, and some cicatrization had in that time been effected along the margins of the burns on the head and neck, and the lower margin of the burns of the forearm. In this interval of time powdered oxide of zinc was twice sprinkled over the denuded surface, but occasioned each time so much pain that its use was discontinued.

To my inquiries each morning as to how she felt, and was doing, I always got (during these four weeks) a most cheerful answer from the patient,—that everything was doing well; and the answer was given in such a way that I fully understood that she did not want me to make any change in treatment.

My resident, Dr. Gerhard, told me, however, at the end of this time that things were not making good progress, and, after a careful examination, during which it was quite evident the patient was very much afraid of me, I determined to continue the same treatment. This seemed to inspire the poor woman with a little more confidence. Shortly after this event, the patient whom I have just exhibited was admitted into the same ward, and placed in a bed directly opposite to this one; and it afforded me no little amusement to observe the latter's intense interest in the earth treatment, and with each day's favorable report of No. 1, this woman seemed less and less afraid of me, and she would give me a "God's blessing," or a God speed, each time I left the room. Then she began to be a little more communicative, and said the cerate gave her pain, a thing which she would not admit before. Finally she expressed a desire that I should do something more for her than was being done. Last Monday week (April 3) I determined to apply the earth to the forearm only, and so dispossess the patient's mind of the notion which had evidently been at one time very strongly impressed there, that such a dressing would not suit her case, and which still had some footing, for she murmured something about not being strong enough to bear it.

The following is the note taken of the condition of the ulcer on that day:

"There is a continuous ulcer involving the right side of the head and neck, the shoulder, as far down on the back as the spine of the scapula, the front of the right chest, involving the whole mamma, the side of the chest, axilla, the whole arm and forearm to within two inches of the wrist. The hand and these two inches of the forearm are covered with a scaly cuticle. There are two small islands of cuticle of about the size of a dime on the dorsum and ulnar side of the forearm. All this ulcerated surface has a pale, smooth, and glazed appearance, with distinct vessels distributed on it, and does not seem to have healed any in the last three weeks. The discharge is thin and serous in its character."

I then sprinkled the surface of the forearm and about two inches of the arm at the elbow with finely-sifted clay, and noticed with satisfaction the change of expression in my patient's face: it was that of positive relief from dread. Over this powder I applied the strips of bandage covered with wet clay, then the waxed blue paper and a spiral. To the rest of the burnt surface I had the cerate of oxide of zinc reapplied as heretofore.

On the next morning the patient stated that she had been entirely free from pain in the parts covered by the earth, but that it still continued in the parts to which the cerate was applied. When I took the dressing off the forearm it was found that one of the islands of cuticle, which the day before was of the size of a dime *only*, had increased so as actually to measure five *inches* in length by two and three-quarters in width, and extended from the olecranon down along the back of the forearm. There was also a good-sized spot, over one and a half inches in diameter, well covered with skin, on the back of the arm. The granulations over the rest of the surface which had been covered by the earth had evidently become more healthy, as could be seen by contrast with the part which had been covered by the cerate. The discharge was also thicker, and much less in quantity.

On the next day it was noted that the skin formed on the back of the forearm had reached to eight inches in length, and had increased considerably in width. The discharge was thicker and more abundant, and had kept the dressing thoroughly saturated. The patient complained of having had pain on the under surface since midnight. This I proved to have been caused by the dressing getting saturated and being kept so by the waxed paper; for that afternoon I removed the dressing to show the case to my distinguished friend Professor Gross, who did me the honor of coming to see some of the cases on which I had been using the earth dressings. In place of the waxed paper I applied the dressing with the plain blue paper, and the next morning everything was dry on the outside, and the patient had not had any pain whatever in the forearm.

You can now see what changes have occurred since then,—that is, in the last six days. Here is the large island of skin,—much increased in size,—with all its conditions as perfect as though there had never been an injury there. Notice carefully the characters of the skin which has been formed here: they are precisely like those of the skin of her other arm, which was never injured, save in the color. Contrast also the surface not yet healed, and which has been under the influence of the earth for nearly ten days, with those of the parts where the cerate has been constantly applied, and you can see a very great difference. As I peel off with the forceps a cake of the earth here on the back of the forearm, you will notice that the surface is bedewed with a clear transparent fluid, like that on the surface where the cerate has been; but in a few seconds this fluid in the former place congeals, and gives us the idea that the parts there are actually healed, whereas in the latter it remains a thin serous fluid. It is thus evident to you that in the one place—where the earth has been—the fluid exuded is coagulable, whereas in the other it is not so. This, as you well know, is a very important difference. The relief that this poor old woman has had from the earth dressings has made her very importunate to have them applied all over her injury; and I have promised her that they should be to-day, after you have had the opportunity of contrasting the effects of the two kinds of dressings.

Now, I think I have proved to you by this case all that I promised, namely, that earth exerts a healing influence even where the general conditions of the patient are not the most favorable. I will now show you a case where the earth dressings have been applied to

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one set of burns, and the ordinary treatment to another, both the result of one (and a similar) injury to different parts of the body. This case you will all remember my having exhibited here shortly after his admission.

Case III.—This patient burned himself whilst drunk, by going into a rolling-mill and falling on some iron which had just been removed from the rollers. The injuries which he thus sustained were four deep burns,—one set of two on the left temple and side of face, and the other of two on the forearm and hand of the right side. He was admitted to the hospital shortly after the accident, on the afternoon of March 28, and my resident, recognizing the fact that these four deep eschars had to be separated before any repair could take place, applied to them all yeast poultices. When I saw the case at my usual hour of visiting the wards the next morning, at 7½ o'clock, I thought it was an excellent one for making a comparative trial of the earth dressing and of the ordinary treatment. I therefore selected for the former the worse set,—the burns on the head. These were—one involving all the temporal fossa, within half an inch of the ear, and the other an eschar or burn of the fourth degree, an inch in diameter, directly over the zygoma, and separated from the first by not more than an eighth of an inch of sound skin. The burn in the temporal fossa involved not only the skin through its whole thickness, but also the temporal fascia, and a considerable portion of the muscle beneath.

The burns on the extremity were, one just above the wrist, circular in form, and an inch and a half in diameter, and another of nearly the same shape, but half the size, over the dorsum of the carpus. The latter was evidently not of any greater depth than the lesser injury on the head, and the former seemed to go entirely through the subcutaneous cellular tissue. The two sets of burns were, therefore, relatively alike,—although that which I selected for the earth treatment was clearly the worse, certainly the more extensive, of the two.

When I showed the case before, you will remember, the patient was most emphatic in his declarations that the burns under the earth treatment did not give him any pain, whilst those under the poultice and cerate had constantly pained him. He has given us the same answer, of course, when blue wash and nitrate of silver were applied to the burns on the extremity, as it has been necessary to do recently, in order to destroy the flabbiness of the granulations there, and to hasten cicatrization. Now, what I wish specially to call your attention to, to-day, is the result. We cannot very readily make any fair comparison as to the rapidity with which the healing has occurred in the two places,—for there was originally four times as much to heal in the one place as there was in the other. But you can all see for yourselves the difference in the manner in which the healing has taken place. At the wrist the seats of the burns are now occupied by well-defined and hard cicatricial tissue, which is easily isolated from the healthy tissue surrounding it; whereas on the temple you do not see a trace of anything of the kind. Here, between what were the centres of the two burns,—and you will remember that their opposed borders were almost touching,—we have now a surface of perfectly healthy skin of a deep pink hue, free from all induration or adhesion. I can pinch it up and move it freely. There is certainly no way of accounting for this difference on the score of locality. One part has been as much subjected to motion as the other. The patient has been using his hand and arm quite freely ever since the ulcers began to granulate; and the ulcer involving the temporal muscle, you can readily understand, has been subjected to the influence of motion every time he has opened his mouth. The advantages from the earth dressings are here most positively evident.

In illustration of the effect of earth dressings on the results of severe burns I have yet to show you another case, which has occasioned a great deal of amazement among some of my medical friends who have been watching it:

Case IV.—This patient was admitted on the 17th of December last, for severe burns of the right breast and of the inner sides of both lower extremities in the vicinity of the knee-joints. These burns were mostly all of the fourth degree. She was also burnt on the neck in the first and second degrees. The accident was the result of a child throwing a lighted match into a lamp which this woman was filling. When she came under my charge, on the 1st of February, the injuries were nearly all healed. There were some ulcerated spots around the margins of all the deeper burns; but the cicatrices were so contracted at the knees that the patient could not stand on her limbs. There were also the most positive evidences of keloid degeneration,—that form of keloid which occasionally shows itself in cicatricial tissue. This is, strictly speaking, a hypertrophy of the fibrous element which enters into the structure of ordinary cicatrices. Such growths, we are told by Mr. Paget, "rarely surpass half an inch in thickness or more than half an inch in any direction." In this case they had some time since attained nearly such a size, and had not changed any in the past month—up to last Thursday. My presumption was, therefore, that they had ceased to grow, and, recalling the effect of the earth dressing on similar hypertrophies which I had seen, I determined to give it a trial here. The patient had then been over fifteen weeks in bed, in a helpless condition,—for she could not move from where she was lying, except on her hands and knees or buttocks. I had directed constant resort to passive motion, to see what it would do to overcome the tendency to contraction; but further than that I had not meddled with the treatment under which I found her.

On last Thursday I selected the right limb for the trial of the earth. My reasons for doing so were that it was by far the worse of the two. The burn on this limb had originally extended from six inches below the knee to within an inch of the vulva,—equal to sixteen inches in length,—and involved at the knee two-thirds of the circumference of the limb: the injury to this limb was thus thrice as great as that which the left had sustained. The keloid degeneration was also very much worse; and so with the contraction of the knee, for it was such as to hold the limb bent at an angle of about 80 degrees, whereas the contraction of the left was not over 40 degrees from the straight line of the thigh,—and it was quite evident that if she could only get this *right* limb sufficiently straight to sustain her weight, she would be able to move about with facility. Professor Gross in his visit to the wards with me on Wednesday evening saw this woman and examined her with considerable interest. I did not inform him at the time of my intention to use the earth dressing in the case. When he saw her again, two days later, his surprise was very evident; she was then walking about the room, and expressed herself to him as very much relieved of the pains with which she had been annoyed prior to the earth being applied. There was, even at that early date in the use of the earth, a marked improvement in the appearance of the surface of the cicatricial tissue. It was not only not so indurated as it had been, but it was less so than the cicatrix on the left knee. No blisters had formed on the portions occupied by the keloid, and the subjacent tissue was evidently freer. Pinching up the margins of this cicatrix, so as to embrace a thickness of the sound skin and one of cicatricial tissue between the finger and thumb, it was susceptible of demonstration, by contrasting it with a similar fold of sound skin alone, that the cicatrix was a quarter of an inch thicker than the sound skin.

Forty-eight hours later, this difference was reduced one-half; and to-day, six days only since the earth was first applied to this knee, you can see for yourselves by comparing the two knees that improvement has occurred. All the cicatricial tissue which has been covered

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by the earth has become soft and pliable, and presents in that respect alone a marked contrast to the portions which have been left uncovered. You can also perceive how much more readily she can use this limb, straightening it perfectly, and bearing her whole weight on it. This is a result unquestionably due to the earth dressing.

ORIGINAL COMMUNICATIONS.

JAUNDICE CAUSED BY THE PRESSURE OF ENLARGED GLANDS UPON THE DUCTUS CHOLEDOCHUS COMMUNIS.

BY JAMES H. HUTCHINSON, M.D.,

One of the Physicians to the Pennsylvania Hospital; Vice-President of the Pathological Society.

THE case which has suggested this communication was one of jaundice from obstruction, originating, in part, from the pressure of enlarged glands upon the common gall-duct, and, in part, from perihepatitis. For the following notes I am indebted to Dr. J. C. Wilson, resident physician at the Pennsylvania Hospital.

Charles McL., Irish, æt. 26, married. Emigrated to this country four years ago, and has ever since worked in a coal-mine, but appears previously to have been an iron-miner. Has no hereditary tendency to disease. His parents, brothers, and sister are all alive and well. One of his children died of hooping-cough, the other is healthy. Has been a moderate drinker, never exceeding, except on rare occasions, two glasses of whiskey a day. Denies ever having had a chancre, and certainly presents no evidence of the syphilitic taint. Has also enjoyed good health until the commencement of his present illness, which began in July, 1870, with a short, dry cough, pain in the side, loss of strength and flesh, failure of appetite, and diarrhœa. Towards the close of July he stopped work, and in September jaundice was added to the other symptoms.

On admission.—His weight is 122 pounds; his skin and conjunctiva are of a bright yellow color; his tongue is very red, with a coating of white fur in the centre. His voice is whispering and suppressed, and there is slight laryngeal stridor. He coughs especially at night, and occasionally expectorates muco-purulent sputa. His passages are liquid and large, and are almost as white as chalk. There are also clubbing of the finger-ends, and œdema of the feet, but no ascites. Upon inspection, the right side of the chest is smaller than the left, and moves less freely; the right shoulder is depressed, and the right infra-clavicular region is retracted. Upon measurement, the chest, one inch below the nipple, is 34⅜ inches in circumference (his usual girth being 36 inches); the left side being 17½ inches, the right, 16⅞ inches. On palpation, the vocal fremitus is more marked over the lower part of the left side of the chest than the right. The margin of the liver cannot be felt below the arch of the ribs, but there is a feeling of resistance on the right side. On percussion, there is less resonance over the whole of the anterior surface of the chest on the right side than on the left. Hepatic dulness begins in the line of the nipple at the lower edge of the fifth rib, and extends to a point half an inch below the arch of the ribs; in the axillary line, it begins at the seventh rib, and extends four inches. There is extension of dulness to the left, and also marked dulness in the triangular space included between the ensiform cartilage and a line connecting the tenth ribs.

On auscultation under the right clavicle, the respiratory murmur is harsh and somewhat jerking. No adventitious sound can, however, be heard. Posteriorly the respiration is feebler on the right side than on the left.

The impulse of the heart is felt in its usual position, and a pulsation is noticed in the epigastrium; but there are no signs of disease of the heart or of the large blood-vessels. His pulse, respiration, and temperature are as follows:

	Pulse.	Respiration.	Temperature.
Feb. 4, A.M.	96	22	101
" " P.M.	112	21	102½

The examination of the urine gave the following result: Sp. gr., 1013; reaction, alkaline; color, brownish red; contains albumen and a slight amount of biliverdin, but no bile-acids.

Feb. 9.—The patient complains to-day of a very severe pain in the left axillary region. On physical examination, dulness on percussion, and a faint, inconstant friction-sound, were observed. The ensiform cartilage is seen to be tilted forwards. The following measurements were taken: Distance from tip of ensiform cartilage to pubis, 12¼ inches; to umbilicus, 6¾ inches; girth of body at ensiform cartilage, 35¼ inches; an inch and a half lower, the same; at umbilicus, 31½ inches. There is occasional expectoration of clots of blood mixed with mucus.

Feb. 24.—An erysipelatous flush on the left side of the face was noticed to-day. It is not accompanied by constitutional symptoms of severity.

Feb. 28.—The other side of the face is to-day invaded by the erysipelas. The jaundice appears to be less marked. The measurements of the abdomen are, however, somewhat increased. The patient, who, up to the time of the commencement of the attack of erysipelas, had improved, has lost, in consequence of it, the little ground that he had gained. The voice, which had resumed, to a slight degree, its sonorous character, has been again reduced to a whisper, and we are unable to use local medication, since he says the use of tr. ferri chloridi and other remedies by the atomizer excites vomiting.

March 13.—The girth of the body, an inch and a half below ensiform cartilage, is 34¼ inches,—an inch less than when measured on February 9.

March 20.—Epistaxis, which has occurred more than once during his sickness, has now become a troublesome symptom. It has, however, thus far been checked by the use of styptics.

March 25.—The patient is evidently sinking. Hepatic dulness in the line of the right nipple begins at the sixth rib and extends to the arch of the ribs. There is still dulness in the epigastric region. Although the muscles of the abdomen are much less tense than they were, the edge of the liver cannot be felt. The discoloration of the surface has very much increased, the patient's skin being now of a greenish-yellow hue. His irides, which are naturally blue, are now decidedly greenish. The emaciation has very much increased, and the feet have become more œdematous. His shirt and the sheets of his bed are discolored by the urine.

March 26.—Patient evidently worse, but says he is better and that he feels more comfortable. The respiration has become more stridulous, indicating the probable presence of submucous laryngitis. There are no petechiæ, and no diarrhœa, and the tympanitic distention of the abdomen has entirely disappeared, the circumference at umbilicus being only 28½ inches; between ensiform cartilage and umbilicus, 27½ inches; at ensiform cartilage, 34 inches; the distance from ensiform cartilage to pubis, 10 inches; to umbilicus, 5⅜ inches.

March 27.—Death took place to-day at 10 A.M. The autopsy was made the same day, six hours after death. Rigor mortis well marked. Emaciation of upper part of body extreme. Lower extremities œdematous. Surface uniformly discolored, being of a greenish-yellow color.

Head not examined.

Thorax.—On cutting through the skin over the sternum, the little fat that remained, as well as the fasciæ, was found to be stained by the biliary coloring matter. The muscles were dark brown in color. No effusion in either pleural cavity, and no adhesions between the costal and visceral surfaces existed. The lungs were of an intensely black color, and when cut exuded a frothy black liquid, which stained the hands. The pleura of the right lung was thickened, and between the lobes of the corresponding lung fine adhesions were found. The lungs contained a number of minute bodies resembling to the touch miliary tubercles.

The heart and aorta were healthy. The veins of the neck, when cut across, exuded a liquid blood which also discolored the hands.

Abdomen.—The liver was found to project beyond the arch

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of the ribs on the right side, but did not extend higher into the chest than the fifth interspace. The left lobe was much enlarged, and, filling up the whole of the epigastric region, extended far into the left hypochondrium. The upper surface of the right lobe presented an appearance of granulation; and when its substance was examined microscopically, it showed an excess of oil and of fibrous tissue. In the left lobe this condition was not so marked. The capsule was thickened, and firm adhesions existed between the stomach and duodenum and the liver, and bands of connective tissue were seen passing across the longitudinal fissure. The head of the pancreas felt hard, but presented no further evidences of disease. Directly over the ductus communis choledochus, and bound down upon it by adhesion, several very much enlarged glands were found. No other cause of obstruction could be discovered; certainly none existed within the duct itself, for a probe could be passed readily through its whole extent, and also into the hepatic and cystic ducts. The gall-bladder, which was not distended, contained about an ounce of viscid and olive-colored liquid. The kidneys were enlarged, and presented the microscopic appearances of an early stage of desquamative nephritis. Portions of the kidneys and of the liver were tested with Lugol's solution, but no evidences of albuminoid degeneration were found. The mucous membrane of the bowels was congested. The colon contained a large amount of matter of a brownish-red color, which had no fecal odor, and which appeared to be in large part altered blood. The spleen was about double its normal size. Its surface was covered with shreds of membrane. A small amount of a highly-colored serum was found in the pelvic cavity.

(*Note from Dr. J. G. Richardson, Microscopist to the Pennsylvania Hospital.*)

On microscopic examination of a thin section from the lung, the black color was seen to be due to particles of pigment, often aggregated into large masses, concealing and apparently occupying whole groups of air-cells; when isolated, these intensely black granules were observed to average about $\frac{1}{7000}$ of an inch in diameter, and to be arranged in some instances with considerable regularity upon the free surfaces of the vesicles, as though deposited from the inspired air.

I have purposely avoided giving details of the treatment, because the notes of the case are already very long, and because it consisted simply in the administration of remedies calculated to improve the general condition of the patient, and also in that of those which were from time to time indicated by special symptoms. At first slight improvement seemed to take place, but the ground gained was more than lost during his attack of erysipelas. At my first visit to the patient I was particularly struck, not merely by the prominence of the lower part of the chest and of the upper part of the abdomen, but also by the disparity between the two sides of the chest, both as regarded size and movement. Now, although this disparity was found to be less upon actual measurement than it had appeared to the eye, it seemed, when taken in connection with the physical signs recorded in the notes, and with a slight lateral curvature of the spine which was also found to exist, to lead necessarily to the conclusion that at some time during the course of his illness the patient had had a pleuritic effusion, which was now in process of absorption. A laryngoscopic examination was made, but with no very satisfactory results. The loss of the sonorous voice, which, he said, had existed for some months, rendered it certain, however, that the vocal cords were the seat of ulceration.

It was, as may be readily imagined, no easy matter to make a correct diagnosis of the condition which produced the jaundice. It was not until after repeated examinations that I could satisfy myself, and those who saw the case with me, that there was no great enlargement of the liver; and even after having settled this point the cause of the jaundice was not at once apparent. The absence of great enlargement seemed to exclude from consideration both cancer and abscess of the liver, more especially as in neither of these conditions is jaundice a necessary or even frequent complication, for in 91 cases of cancer of the liver, collected by Frerichs, 52 died without ever having been jaundiced, and in 120 cases of abscess Morehead noted jaundice as present in only 5. The other diseases in which enlargement of the liver occurs to a greater or less extent, as fatty degeneration, albuminoid degeneration, and cirrhosis, are very seldom, and then only accidentally, accompanied by jaundice. After a careful review of all the symptoms presented by the case, and of its previous history, there seemed to me scarcely a doubt that the common gall-duct must, from some cause or other, be obstructed. It was very unlikely that this obstruction depended upon the impaction of gall-stones in the ducts, for throughout the whole course of his illness the patient had never suffered from hepatic colic. Of the other causes of obstruction, perihepatitis seemed to me to be the most probable, and for the following reasons: At various times the patient complained of pain in the right hypochondrium, and this pain was decidedly increased by pressure; besides this, there was a constant elevation of temperature, which showed the existence of inflammation, and the patient had evidently had an attack of right-sided pleurisy, which, it is well known, is sometimes followed by inflammation of the capsule of Glisson. Upon this view of the case, it was difficult to explain the increase of size of the liver, as an obstructed duct sooner or later leads to atrophy of this organ; but the difficulty did not seem to me insuperable, since the obstruction in this instance might have occurred subsequently to the enlargement. In fact, a reference to the notes will show that, as the case progressed, there was a little diminution in the hepatic dulness. The upper boundary of the liver in the mammary line, having been originally at the fifth rib, was, towards the close of life, not higher than the sixth. It is, therefore, very probable that contraction was going on during the time the patient was under observation.

The autopsy confirmed, to a very great extent, the correctness of the diagnosis. In addition to the perihepatitis, enlarged lymphatic glands were found pressing upon the duodenal end of the ductus communis choledochus, in such a position, however, as not to affect the portal vein or the hepatic artery, and hence the absence of all symptoms of compression of these vessels. The number of these glands was three or four. The largest one was about two inches in length, one inch in breadth at its broadest part, and about half an inch in thickness, and was bound tightly down upon the duct, so that it was necessary to make a careful dissection to separate them. The occlusion could scarcely have been complete, for there was distention neither of the gall-bladder nor of the gall-ducts within the liver. The friction sound occasionally heard in the left infra-axillary region was undoubtedly due to the coating of lymph upon the spleen.

Although enlargement of the glands in the fissure of the liver is generally included among the conditions which may give rise to jaundice, yet, if we are to judge from the number of the reported cases, it is not a very frequent cause of it, for in the twenty-one volumes of the proceedings of the Pathological Society of London I can find but three cases in which it is assigned as the principal cause. One of these is reported by Mr. Handfield Jones in vol. v., and the other two by Dr. Murchison in vol. xx. A fourth case, reported by Dr. Samuel Wilks, will be found in Guy's Hospital Reports, 3d series, vol. v. In none of these does it appear that distention of the gall-bladder was present, and its absence was probably due to the fact that the obstruction of the duct under these circumstances is less likely to be complete and more likely to be intermittent. The absence of a

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pyriform tumor below the ribs in cases of jaundice from obstruction may, therefore, be, in some cases, of diagnostic importance.

MEDICAL NOTES.

BY JAMES E. REEVES, M.D.,

Wheeling, W. Va.

WHILE engaged a few months since in the preparation of the Epidemiological Record for my recently published pamphlet,* the subject of the treatment—past and present—of some of the diseases therein mentioned very naturally presented itself for consideration and study; and the following pages were at that time written with a view to their publication in the columns of the *Times*, to represent the character of medical practice and experience among West Virginia physicians.

I.—DYSENTERY.

In the treatment of dysentery various and widely different methods of practice have been employed, and with equally varying success. The calomel and opium plan—a cathartic dose of calomel in the beginning, and subsequently one or two grains of this medicine, with opium and ipecacuanha, administered every two or three hours—embracing also, very frequently, general blood-letting, was begun with; and even at the present day (bleeding from the arm perhaps omitted) this old method of practice has many confident advocates, who, when they are asked for the reason of their faith, adduce experience!

The next plan generally employed was—first, a full dose of castor oil, and then opium and calomel in small doses administered several times a day, with the view, among other things, of producing ptyalism as speedily as possible.

Another plan was—first, the thorough cleaning out of the primæ viæ by a dose of sulphate of magnesia dissolved in an infusion of *peach-leaves*,—this dose to be repeated every morning, and a full dose of opium or Dover's powder at night,—and a diet of soup made of *parched* wheaten flour. This method of treatment was successfully employed in the Randolph Valley by Dr. Bosworth, of Beverly, who is now one of the oldest physicians in the State.

Another plan was the almost exclusive use of a saturated aqueous solution of the sulphate of magnesia in connection with dilute sulphuric acid, in the proportion of seven ounces of the saturated solution of the sulphate of magnesia to one ounce of the diluted acid—the formula of Dr. Henry, of Dublin—of which mixture a tablespoonful was given every hour until feculent discharges were produced; and this process was repeated every morning until convalescence was established. That it also was successful in a large number of cases, there can be no doubt. The late Dr. D. B. Dorsey, formerly of Ohio, was eminently successful in the treatment of the disease by this mode of practice; and the same plan has been pursued for many years by his son, Dr. D. B. Dorsey, Jr., recently of Fairmont, West Virginia, but now of Chillicothe, Missouri, with equally gratifying results. From the latter I have received a letter giving, in addition to some general directions suggested by their experience in the use of the remedy, the proportions employed by his father and himself, which are as follows:

Saturated Solution of Sulphate of Magnesia, f℥viij;
Aromatic Sulphuric Acid, f℥j.

In his letter Dr. Dorsey says, "Sometimes, after adding the elixir, the mixture solidifies. This is owing to an excess of sulphate of magnesia not dissolved, but *suspended* in the water. The remedy is, therefore, the addition of a little water. I always prefer soft water.

"The dose is from one to three tablespoonfuls, given every three or four hours *until fecal evacuations are produced*. This is, in fact, the measure, and the only measure, in administering the preparation. It should be increased in quantity, and even in frequency of administration, until the fecal evacuations appear. Then the dose should be diminished at once to about one-third of the quantity previously required, and should be continued a day or two.

"While this is in use, no other remedy should be employed, except an opiate at night; as experience has shown that the ordinary routine—astringents, mercurials, etc.—only impedes the proper action of the magnesia. Of course the usual observance of exceedingly rigid regimen should not be omitted.

"Those who have best known and most used this mixture have relied on it *exclusively* in the treatment of simple dysentery; and it has never failed them in a single instance, to my knowledge."

Another plan was the strict prohibition of cathartic medicine after the exhibition of a simple dose of castor oil, to which, usually, ten or twenty drops of laudanum were added to restrain or prevent its violent action, entire reliance being placed on large doses of opium and ipecacuanha. This method of practice gave much encouragement, and found a large number of advocates.

The following is the plan of treatment which I have myself been in the habit of employing during the last ten years in the management of dysentery, and which, indeed, has given me so much satisfaction that I could not be induced to exchange it for any other with which I am acquainted:

I. If constipation have preceded the attack, and the dejections are scybalous in character, a dose of castor oil, with or without ten drops of laudanum, is administered.

II. If preceded by diarrhœa, neither cathartics nor laxatives are to be administered, but the following powder is given in a teaspoonful of the tincture of cinnamon every four or six hours:

℞ Bismuth. Subnit., gr. xvj–xxx;
Cretæ præparatæ, gr. x–xv;
Pulv. Ipecac. comp., gr. iij–vj. M.

One-half to one grain of powdered opium may be either added to or substituted for the Dover's powder.

III. To diminish febrile heat, and control the pulse, the solution of acetate of ammonia in tablespoonful doses, with or without the addition of from one to four drops of Norwood's tincture of veratrum viride, may be given every three or four hours.

IV. Cold water may be allowed as a drink, but should be taken only in small quantities at a time. The diet should consist of boiled milk and bread.

V. To relieve straining and griping, if the bismuth powders fail to secure relief, suppositories containing two grains of acetate of lead and half a grain of acetate of morphia should be employed. For the relief of strangury, first inject a small quantity of cold water into the rectum, and then introduce the suppository.

VI. Rest in bed is to be strictly observed: no attempt should be made, from first to last, to sit during an effort at stool or when emptying the bladder; and herein lies the secret of success in treatment. In a word, *posture* is everything in the successful management of dysentery.

(To be continued.)

* The Health and Wealth of the City of Wheeling, including its Physical and Medical Topography; also General Remarks on the Natural Resources of West Virginia. By James E. Reeves, M.D., City Health Officer. Second edition, enlarged and illustrated. Octavo, pp. 158. Baltimore, 1871.

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A CASE OF POISONING BY STRYCHNIA

SUCCESSFULLY TREATED WITH BROMIDE OF POTASSIUM.

BY CEPHAS L. BARD, M.D.,

San Buenaventura, California.

THE following history of a case of poisoning by strychnia, and its successful treatment by bromide of potassium, will illustrate the wonderfully antagonistic action of these two drugs, and the efficacy of the latter as an antidote to the former:

Strychnia was placed in a sack of flour belonging to George Starr, aged 35, a ranchero, living in the Cañon de Santa Paula, Santa Barbara County, California, by some unknown enemy, during the morning of February 6, 1871. On the evening of the same day this flour was made into cakes, some of which were eaten by Starr. A few moments afterwards his attention was called to the fact that something was wrong, by the powerful contractions of the muscles of the neck, especially the sterno-cleido-mastoids. Fully realizing his position, he at once determined to go to a neighbor's house, in reaching which he had, however, the greatest difficulty, the muscles of his legs frequently contracting with so much force that he was thrown to the ground. Sweet oil and the whites of eggs were freely given, and their use persisted in till my arrival, some hours later. No emetics were given and no vomiting whatever occurred prior to or after my arrival. The patient presented the following symptoms when I saw him: muscles of legs and arms rigidly flexed; slight opisthotonos; great dyspnœa; skin livid, and complete coldness of entire surface of body; jaws fixed, lips retracted, the teeth covered with frothy saliva; deglutition almost impossible; mind clear. The patient was thoroughly aware of his condition. The contractions were clonic in character, but the relaxations of short duration. The mouth was only opened with the greatest difficulty, and when medicine was forced into it the spoon was seized by the teeth. Having seen the report of a very similar case in the *American Journal of the Medical Sciences* for October, 1870, which was successfully treated by Dr. Charles B. Gillespie with the bromide of potassium, and knowing that this drug exerts a sedative action on the excito-motor functions of the spinal marrow by diminishing the capillary circulation in this organ, I concluded to rely upon it as an antidote. Dissolving an ounce of the salt in a cup of water, I gave the patient half of it at once, and continued its use in smaller doses for an hour or so afterwards. Its good effects were shown in a diminution of the reflex excitability, and in the relief of the spasmodic action of the muscles of the pharynx, the difficulty of deglutition being consequently very much lessened. In less than thirty minutes after the administration of the first dose, complete relaxation of the whole body, accompanied by a return of warmth and by profuse perspiration, occurred; and on the following day (less than twenty-four hours from the time of taking the poison) he arose from his bed, perfectly free from any unpleasant effects of either the poison or its antidote, with the exception of paralysis of the intestines, which finally yielded to the use of the bromide.

In the case reported by Dr. Gillespie the poisoning was produced by three grains of strychnia; but in the case just reported a much larger quantity must have been taken, since the symptoms were more marked, and since a chemical analysis of the flour showed that it contained a large amount of strychnia. A piece of one of the cakes, of which Starr had eaten, was moreover given to a dog, and produced death in twenty minutes. The oil which was swallowed in large draughts prior to the administration of the bromide acted beneficially only, in my opinion, by retarding the absorption of the poison, as the symptoms at my arrival were more distressing than at any previous time. I am ignorant of any case where oil, unless acting as an emetic or followed by an emetic, has been found to be a complete antidote. From my experience in this case I am convinced that complete reliance can be placed on the power of the bromide as an antidote to strychnia, and that the effects of these two drugs are as mutually antagonistic as are those of opium and belladonna.

ERRATUM.—On page 294, second column, line 16, of the last number (16) of the *Medical Times*, instead of 32 grammes, read 12 grammes.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF PROF. D. HAYES AGNEW, M.D.

Reported by James C. Wilson, M.D.

TRAUMATIC STRICTURE OF THE URETHRA—ABSCESS OF THE PROSTATE—DEATH—AUTOPSY.

THE early notes of the case of J. C. having been reported in Dr. W. Hunt's paper on "Traumatic Rupture of the Urethra," which appeared in the number of this journal for February 15, we present the following summary of what was then published.

The stricture in this case was the result of a severe injury of the perineum, received by being caught between two coal-cars, which he was unloading at the time. Some improvement in the condition of his urethra was effected, but, symptoms of blood-poisoning having developed themselves, he was advised to leave the hospital, and to return when his general health had improved.

He was readmitted, January 4, 1871, in pretty good general health. The anterior strictures, which had somewhat contracted, were again dilated. His health, however, again became impaired, and in a short time all surgical interference was desisted from.

April 7.—Complains of irregular chills, followed by fever and occasional sweats. Is very weak; has at times diarrhœa; expression is anxious and troubled; does not complain of pain; there is great tenderness in perineum; skin dry, harsh, earthy in color. A thick, milky urine, loaded with pus, escapes continually from the fistula, and dribbles from the penis. It is highly albuminous, and contains abundant phosphates, but no renal tube-casts are seen.

The pulse is small, compressible, and ranges between 100 and 120.

Temperature between 99° and 100°.

April 14.—Nocturnal delirium and subsultus tendinum have been superadded to the symptoms.

April 21.—Death.

The autopsy, made thirty-one hours after death, disclosed an impermeable stricture, five lines in length, immediately in front of the membranous portion of the urethra, with laceration of the wall of the canal anterior to it, and tunnelling of the surrounding tissues. The bladder was hypertrophied, and the ureters and the pelves of the kidneys were dilated, and contained a milky, turbid urine. The prostate gland was about the size of a small orange, and the seat of an abscess which involved its entire substance and encircled the prostatic portion of the urethra. The perineal tissues were infiltrated with urine.

No abscess was found in any other part of the body. No collection of pus in any joint or tissue.

INCISED AND PUNCTURED WOUNDS.

Case I.—J. H., æt. 23, a cigar-maker by occupation, was admitted to the hospital Sunday evening, April 23, with an incised wound, two inches in length, on the outer aspect of his left arm, over the lower portion of the deltoid, and in a direction at right angles to the fibres of that muscle. A tipsy companion seized a knife used for cutting bread in a beer-saloon, and, making a pass at him in sport, inflicted the wound. It is

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very superficial, extending through the deep fascia, and dividing a few of the fibres of the deltoid. The cephalic vein is just beyond the anterior extremity, and barely escaped. The edges of this wound having been adjusted by means of adhesive strips, the main indication is to keep the arm at rest; though this man's arm and hand have been confined by a bandage extending around his body, the wound gapes, and must heal by granulation. Union by the first intention is not likely to occur in such cases as this, because it is almost impossible to keep the parts at rest.

[May 13.—The wound has healed, and the man is to-day discharged from the hospital.]

Case II.—John Hertzer, æt. 19, a barber; admitted April 30. The night before admission he received a wound on the inner surface of his right arm, a short distance above the condyle. This wound, as you observe, is oblique, and presents the appearance of being both a punctured and an incised wound; that is, the knife has been *thrust* into the tissues and then *drawn* out on its edge. It lies between the course of the ulnar nerve and that of the brachial artery, and penetrates the ligament of the joint, allowing the escape of synovia from it: there are no bursæ in this situation that could have been injured, and thus have given rise to the escape of such a thin, soapy, lubricating fluid. The hemorrhage from this cut was abundant, and the patient lost a good deal of blood before admission, although Monsel's salt in powder had been applied, with compresses. The wound was cleansed as well as possible, and then slightly enlarged in order to reach the bleeding vessels. Two ligatures were applied, without doubt to branches of the recurrent ulnar and the anastomotica arteries; it now being the seventh day, these come away, you perceive, with the slightest traction. The lips were brought in contact by sutures of silver wire and adhesive plaster, and the arm put at rest upon an anterior right-angled splint. The wound is now united at its ends, but that portion which was treated with the powder of the persulphate of iron has failed to unite at any point. Many of the wounds that come into this house are found to have been packed with this preparation before admission, to arrest hemorrhage. This is very bad surgery, and should generally be avoided. Monsel's solution is very useful as a styptic and as a disinfectant; and where it is not desirable that wounds should heal by what is called first intention, pieces of lint moistened with it constitute a valuable dressing; but the powdered salt should never be applied to any wound.

The wound is dressed now with adhesive plaster and ung. zinci oxidi, thinly spread upon old muslin or linen, a favorite dressing. The angle of the splint is to be changed from time to time, and the arm kept otherwise at rest. There is danger of a stiff joint.

[May 13.—The signs of joint trouble are now very slight; there is motion without pain through a considerable arc. Synovia no longer escapes from the wound, which is healing by granulation. The splint is still retained, its angle being changed from day to day, and the joint freely moved at the time of changing the dressings.]

Case III.—J. C., æt. 26, peddler; admitted May 4. This man, in a drunken quarrel, received a stab on the right side of the neck, just below the lobe of the ear. The wound is transverse and scarcely three-fourths of an inch in length; it involves the substance of the parotid gland. There was considerable bleeding before his admission, doubtless from the vessels of the gland. This was arrested, as in the preceding case, by the use of some styptic, and plugging the wound with lint. On his coming into the hospital, the plug of lint was removed, and the edges of the wound were drawn together by a suture of silver wire and strips of sticking-plaster, and a compress of patent lint firmly applied. No bleeding has occurred. Since the receipt of the injury the patient's voice has lost its property of sonorousness; he is unable to speak above a whisper. This is probably due to pressure of inflammatory products upon the superior laryngeal nerve, which is probably not directly involved in the injury. There is a good deal of stuffing of the tissues of the neck; and the right side of the palate and right tonsil are congested and enlarged. There has been some difficulty in deglutition. The probable result of such an injury in this situation will be a salivary fistula. You observe this thin discharge now escaping from the wound; it is saliva, the secretion of the parotid gland, no doubt; therefore in the treatment we should endeavor to close the wound tightly at once, and seal it with gauze and collodion, the white-of-egg dressing, or something that will be impervious to air, and to secure, if possible, direct union. A fistulous opening communicating with the gland is very difficult to heal, and demands almost invariably operative interference.

SYPHILITIC ULCER OF THE TONGUE.

John Barlow, æt. 28, born in England, a laborer; admitted May 2. You observe upon this man's tongue, slightly to the left of the median line, an oblong, deep ulcer, into which one could insert the tip of the little finger. The bottom of this ulcer is covered with a foul, unhealthy-looking lymph mingled with pus; its sides are steep, and it is surrounded by an elevated ridge of indurated tissue, and by mucous membrane of a deeper color than that upon the other portions of the tongue. The induration extends forward towards the tip of the organ, and across the middle line to where, on the right side, you perceive this elongated crack or fissure; it is irregularly circumscribed; but, on examining it, we find that it is by no means so dense as its appearance would lead us to suppose, although it is of firm consistence; neither is the ulcer itself quite so deep as it at first sight appears: its abrupt sides, and the elevation of the tissue immediately surrounding it, give it a deceptive appearance in this respect. A slight fetor attends it, but it is not accompanied by pain. There is no enlargement of the glands beneath the tongue, nor can we find that any of the lymphatics are enlarged. This ulcer can arise from only two conditions. It is either cancerous or syphilitic, and it is of the utmost importance to make a correct diagnosis in reference both to treatment and to prognosis. Indeed, in cases where it would be otherwise impossible to decide, the result of treatment enables us to pronounce decidedly in regard to the character of the disease; for the syphilitic ulcer is slow in its progress, and usually yields promptly to treatment, whereas cancer of the tongue extends with rapidity, and is uninfluenced by treatment.

The patient before you is a well-nourished and healthy-looking man; his skin is smooth and clear, and his complexion good. He states that his general health has always been good, that his parents were healthy, and that he knows of no cancerous disease in any relation. He gives us the following account of himself, which, with the evidence already laid before you, enables us to decide pretty certainly that the trouble is of a specific origin. In 1862—nine years ago—he contracted a single chancre, for which he received local and constitutional treatment; the sore healed promptly, and left a slight cicatrix, which is still to be seen on the glans penis; no bubo nor constitutional manifestations followed. Two years ago an ulcer, similar to this one, appeared on his tongue, at the point where this little crack exists. It was treated in an English infirmary, and in a short time got well, and remained so until about six weeks ago, when the induration reappeared and ran on rapidly to ulceration. This man is, then, laboring under syphilitic disease, of which the history of the primary trouble is clear; under treatment he has escaped the secondaries, and now, after a lapse of years, presents one of the manifestations of tertiary disease.

The treatment will be potassii iodidi gr. x, s. t. d., with an application morning and evening of a two-grain solution of the bichloride of mercury to the ulcer. Should this fail, it may be touched with nitric acid.

May 13.—The patient is again before you. The ulcer has disappeared; in its place you observe a slight fissure on the surface of the tongue; the deep purplish-red color is gone, and the induration is barely perceptible. The man is nearly well. Ulcers on the tongue, whatever their nature, heal in this manner; at first they diminish in diameter, and contract from side to side, while the length remains the same, until at last a little crack or fissure such as this is seen. This often persists, without giving any trouble, for a long time, and finally disappears. Ulcers on this organ rarely, if ever, heal by formation of cicatricial tissue circularly around their edges, as do ulcers on the limbs and in other portions of the body.

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JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROFESSOR GROSS, MAY 15, 1871

Reported by Dr. Ralph M. Townsend.

FUNGUS OF THE EAR.

A YOUNG, unmarried girl, aged eighteen years, presented herself at the clinic, complaining of a fetid discharge from her left ear, which has existed since early childhood. The hearing by this ear is almost gone, though, to the best of the patient's remembrance, none of the bones of the ear have been discharged. She formerly suffered a great deal of pain in the part, but this has now disappeared. The teeth on the affected side are unsound. Examination revealed the presence of a profuse discharge, from the middle of which, like an island, stood forth a mass of granulations, not unlike those which form the teat-like process around the sinus communicating with dead bone.

The lecturer stated that these growths are always of a secondary nature, and cannot be permanently cured until the cause, under the influence of which they are developed, has been effectually eradicated. The first object of the treatment, therefore, is to get rid of the primary affection. In the present case there is undoubtedly disease of some portion of the temporal bone.

[The exuberant growth was here twisted off with a delicate pair of forceps; and a mild injection, composed of one grain of the permanganate of potassa to the ounce of water, directed to be injected into the ear three times daily. As the mastoid cells communicate with the middle ear, the establishment of an issue over the mastoid process of the temporal bone was also laid down as an essential part of the treatment.

Internally this patient was ordered the use of the following remedies, in solution, three times daily:

℞ Syr. Ferri Iodid., gtt. xv;
Potass. Iodid., grs. iij;
Hydrarg. Chlor. Corros., gr. 1-12.—R. M. T.]

FOREIGN BODY IN THE NOSE.

Ann Sullivan, an unkempt, mischievous-looking child, aged five years, came to the clinic with a discharge of disagreeable odor from the right nostril, which has lasted for a year. On probing there seemed to be a roughness, as if the inferior turbinated bone was diseased. On grasping what seemed to be the denuded bone, at the same time exercising slight traction, a foreign body, which on washing proved to be a piece of cork, was brought away.

Professor Gross stated that whenever children between the ages of one and five years, laboring under these symptoms, were brought to one, the presence of a foreign body might be suspected; since part of the amusement of children often consists in the introduction of foreign bodies into the nasal passages.

Whatever the foreign bodies may be,—peas, beans, pellets of paper, or buttons,—they should be extracted as speedily as possible. If the patient be of sufficient age to assist the surgeon, voluntary effort, or sneezing induced by taking snuff, will often dislodge the substance. Professor Gross also exhibited a little instrument which he had devised for extracting foreign bodies from the ear or nose, by means of which, in competent hands, their removal is much facilitated. Two instances were cited of other ways of removing foreign bodies,—one in which an emetic was given, the mouth being tightly closed with a handkerchief at the moment of emesis, and the other where the foreign body, a hairpin, was pushed back into the posterior nares and then extracted through the mouth.

As a rule, no anæsthetic is required in extracting foreign bodies from the nose.

GANGLIA OF SHEATHS OF EXTENSOR TENDONS OF TOES, WITH RICE BODIES.

Mary Keenan, aged 4½ years, has a lobulated swelling occupying the front of the right ankle and slightly overlapping the dorsal surface of the foot. The tumor totally effaces the natural contour of the parts. It fluctuates, has a peculiar grating sensation when its walls are rubbed under the fingers, and has existed for six months. The tumor is elastic, perfectly movable, free from pain, and unaccompanied by any discoloration of the skin. A feeling of stiffness is complained of in the extensor tendons over which it is situated. This tumor is the result of a series of ganglia—small, circumscribed cysts situated along the course of the tendon—being inflamed, along with an accumulation of the natural secretions of the part.

Treatment consists in rupturing the ganglia and scattering their contents into the surrounding cellular tissue, or, by a subcutaneous incision, opening the sac, evacuating its contents, at the same time scarifying its interior, and then dressing the parts with compress and bandage, having previously painted them over with the dilute tincture of iodine.

[Chloroform was now administered, a delicate bistoury was subcutaneously introduced into the sac, and its contents were squeezed out. The latter consisted of a ropy-looking fluid, somewhat similar to a solution of gum Arabic, containing a great number of small bodies resembling rice or cucumber seed.—R. M. T.]

These rice bodies first have their origin in an effusion of lymph, which after a time becomes organized and attached to the inner surface of the sac. It afterwards becomes separated in consequence of the continual friction of the tendon to which the sac is connected, and assumes the form of the bodies evacuated from this tumor.

THE ACTION OF MERCURY ON THE LIVER.—In a paper read before the Medico-Chirurgical Society of Edinburgh (*Edin. Med. Jour.*, April, 1871) Dr. Thos. R. Fraser reviews the whole subject of the cholagogue action of mercury. After considering various doctrines as to the nature of this action, he says that all that has been actually demonstrated is the increased flow of bile after the administration of mercury. Dr. Fraser believes that this is supported by the following arguments:

1. Certain characters of the alvine dejections imply an absence or diminution of bile, and these characters are present in various diseases.

2. In many of these diseases mercury restores the alvine dejections to their normal condition, or produces in them, as well as in normal dejections, certain characteristic appearances.

3. The characteristic appearances caused in the alvine dejections by the administration of mercury are due to the presence of bile constituents.

The appearances caused by mercury cannot be due, as suggested by Murchison, to the merely purgative action of the drug, whereby the intestinal contents are so rapidly carried to the rectum that the modification and absorption of their bile constituents which occur in normal digestion are prevented, because a similar effect is not found to follow the use of other purgatives, and because, in constipation, where the passage of the intestinal contents is undoubtedly retarded, there need not be clay-colored stools, while, on the other hand, in diarrhœa the stools may be pale or clay-colored.

These views are opposed to those recently promulgated by the Edinburgh committee, and Dr. Fraser is disposed to believe that, in the vivisections made by the committee, several nerves, ramifying in the substance of the common duct and in the surrounding tissues, were necessarily divided, and that it may be that by these nerves an influence is conveyed to the liver by the action of mercury.

DIAGNOSIS BY THE SENSE OF SMELL.—At the last meeting of the Clinical Society (*Brit. Med. Journal*, March 4, 1871) considerable interest was excited by the President's remarks on the subject of the diagnosis of syphilis and other diseases by the sense of smell, a subject to which he had paid some attention, and which, he believed, opened up a field for much future inquiry. Numerous medical writers have casually touched on this subject; and it may be interesting to note that, so long as thirty years ago, Dr. Stokes, of Dublin, called attention to the valuable aid which he believed the sense of smell would be found to afford in the diagnosis of disease: in fact, he expressed the opinion that the nose might, from the mere odor of the surface of the body, be able to detect the difference between pneumonia and bronchitis.

THE INFLUENCE OF THE ATMOSPHERE UPON THE PHYSICAL SIGNS.—In the April number of the *Georgia Medical Companion*, Dr. J. G. Thomas attempts to explain the fact that a slight degree of dulness or of elevation of pitch is at times more readily detected than at others, by attributing it to the variations in the conducting power of the atmosphere.

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EDITORIAL.

MODERN THERAPEUTICS.

No. II.

IN a former editorial upon this subject we pointed out the failure of simple empiricism as a method of therapeutic study, and stated that there is a higher and more rational way. To-day we shall discuss this latter plan. The method dictated by common sense, and the only logical procedure, is, when anything is to be accomplished, to determine, first, exactly what is to be done, and, secondly, to learn the means at command. The mechanic, understanding the use and power of his instruments, is able to produce work only when he has first formed a definite idea of that work. The engineer must know his designs and his means before he can act successfully. The rule indicated is indeed the true law of successful human effort. In medicine, however, it was for a long time utterly impossible to act in accordance with it. There being no real understanding of diseased or healthy action, and consequently no knowledge of what ought to be done in any case, the gropings of a more or less blind experience were the only possible way of advancement. Though this is true, the law holds none the less firmly, and therapeutics can rise to its true dignity only by conforming to it.

The essential groundwork for therapeutics is, then, a knowledge of what interference is needed in the various diseases which meet us every day. It is evident such knowledge cannot be obtained except by a thorough study of the natural history of disease uninfluenced by drugs. The number of factors that enter into the physician's problems are at best appalling; but when to these are added the unknown potencies called drugs, the complication becomes infinite. There must be a study of diseased action simplified to the utmost limit, not artificially complicated by the act of the student. Few evils in this world are absolutely unmitigated, and to homœopathy may be awarded the credit of having demonstrated the power of unaided nature to cure disease in the great majority of cases. Now, evidently the great desideratum is to know *how* nature cures diseases. There are apparently, if not certainly, in most acute disorders, two distinct states or stages,—in the one of which the various processes seem to be directed towards the alteration of normal structure, *i.e.* towards death; in the other, the undoing of what has been done, and the restoring and building up of normal conditions, seem to be the objects aimed at. The first point of investigation in any disease is to determine what processes are destructive, belonging to the first class, and what, belonging to the second class, are reconstructive. Thus, apparently, in sthenic pneumonia all the changes wrought in the first stage are evil, and the processes are therefore to be stopped, if possible, whilst in the second they are reconstructive, and are, if possible, to be aided; whereas in fevers it is very probable that all the processes recognized are the result of changes already induced or of a poison fully absorbed, and, being beneficial in their intent, are to be aided or guided. Having once determined the intent of the processes, the next point for inquiry is their nature, whether they are mere excitations or depressions of normal functions, whether they are perversions of such functions, or whether they are *sui generis*.

All these points, it is evident, must be determined before rational therapeutics can commence its work. Again, it is very conceivable, indeed probable, that processes in themselves reconstructive may become harmful by excess; and this, too, must be determined before the work is done.

If these points were all fully made out,—if we knew with certainty the intent and nature of the various diseased actions,—the problems of rational therapeutics would become comparatively plain. It is not really the therapeutist, so much as the pathologist, who is at present at fault. The moment the laws of morbid and healthy functions are fully determined, that moment can therapeutics hope soon to be among the true sciences.

Such are the requirements of the first conditions of the great law,—the text of the present editorial. They can never be fully complied with, but can be indefinitely approached, and it is not unreasonable to hope will be, some day, sufficiently fulfilled for practical results.

The next element of the law is the knowledge of the means and instruments. Under these two heads are included first and prominently hygienic measures, and secondarily drugs. He who does not recognize the paramount importance of the first of these had better never meddle with the second. We do not propose, however, to say more upon hygienic measures, but pass immediately to drugs.

Empiricism investigates only what may be called the pathological action of drugs. That a medicine in a fever case caused an abatement in the symptoms, and is therefore to be used again, comprises all the knowledge desired. The rational therapeutist, on the other hand, knows that it is as hopeless to attempt to gauge the action of a medicine in disease without a knowledge of its action in health, as to study morbid processes without knowing the functions of health. To attempt to study the physiological powers of a remedy by its administration to diseased organisms is to introduce infinite elements of doubt into a problem already complicated almost beyond human skill. Beliefs, theories, and systems founded upon such investigations must ever be but houses built upon the sand, waiting merely for the ebbing and flowing tides of opinion to sweep them away. Therapeutical studies in disease may be

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very useful as explaining and corroborating knowledge otherwise obtained, but ought never to be primary. There are, indeed, but two possible methods of primary study of this subject, namely, experimentation upon healthy men and experimentation upon the lower animals.

There is a marked tendency among certain clinicians, who have never experimented themselves, to undervalue and sneer at all investigations made upon the lower animals. In his recent work upon the present state of therapeutics, Dr. Rogers reasserts this belief, and also maintains that the rational method of studying medicines is by Hahnemannic provings. To this we most emphatically say no. Of all utterly deceptive methods of research, this merits the palm. If a small dose be taken, the informed imagination conjures up a host of strange guests, and symptoms innumerable come trooping in at its bidding. Any one who has examined those most puerile of puerilities, the provings with which the contemporaneous Hahnemannic records so abound, needs no further proof of this. It is not long since we studied a list of some two hundred and fifty—if our memory serves us right—symptoms detailed as following an innocent potation of carbolic-acid water. On the other hand, if the dose taken be at all toxic, the waiting for the outburst of dangerous symptoms is not, in the nervous Anglo-Saxon, peculiarly conducive to an apt frame of mind for observation. We speak feelingly on this point. We have tried it; and because Dr. Rogers has not, is probably the reason he recommends it. Common sense and experience alike indicate that provings are not only dangerous, but are really of little value. If any one doubts common sense, let him try experience, and we will say, Amen, and God speed you.

The investigation of remedial physiology appears to us to demand, it is true, experiments made upon healthy men; but these experiments are more valuable when performed *upon* those ignorant of therapeutics, and *by* those whose mental acts are not disturbed by drugs or by emotional influences. Any knowledge, however, obtained simply by such experiments as are justifiable upon human beings, must forever remain crude, uncertain, and scanty. This is so evident that it would seem needless to substantiate it by instances, had not writers of deserved repute insisted upon the reverse. There can be no doubt that the vaso-motor nervous system plays a very important rôle in diseased as well as healthy action, and yet without experiments upon animals it is impossible to determine even what drugs affect it, to say nothing of the method of their action upon it. We may guess that ergot and belladonna do act upon this nervous system, but, to make our guess of any more value than a mere wild surmise, investigations upon animals are necessary. Even a cardiac stimulant cannot be counted upon until it has been tried in the laboratory of physiologists. Clinicians have recently insisted that nitrite of amyl is a cardiac stimulant, whereas the truth is that it acts directly upon the heart as a powerful sedative, although it may exert an early, but indirect, stimulant effect on the viscus by lessening the oxygenation of the nerve-tissues, and calling thereby the heart into action for a more rapid supply of blood.

Want of time and space will not allow of our further establishing the point in question. The blind, stricken, halting systems of modern therapeutical writers, the wild discord of opinion in regard to our longest-known drugs, are like the skeletons by the wayside, and alas for us if we cannot read their lessons of wrecked endeavor!

The old trodden pathways will yield us no fruit; out into the comparatively untried fields of experimentation we must go, never doubting of the reward of an abundant harvest. Strange though it may seem, the drugs best understood are those of most recent discovery. What do we really know in regard to the physiological action of opium, our great handmaiden for centuries? Almost nothing; whilst of Calabar bean, the acquaintance of a decade, we know almost everything. What is the reason, but that in regard to the former we have been floundering on in the old ways, whilst the latter has been studied by means of animal experimentation?

That there are difficulties in such experiments none will deny, and chiefest among them is, no doubt, the fact that the same drug often influences different animals so differently.

We cannot believe, however, that these agents in this respect differ from all other created things in being freed from law, and doubt not but that underlying and existing amidst all the apparent confusion are great principles, which, if once grasped, would throw a flood of light upon practical therapeutics. Sometimes in the far horizon even now we think we can catch gleams of great truths, too distant and faint to be distinctly or certainly recognized, yet full of portent for the future.

There are few things so embarrassing to the practitioners as idiosyncrasies. "One man's meat is another man's poison" is the popular recognition of a most anomalous fact. It is not a great many years since the irregularities in the distribution of the human arteries were apparently as lawless and causeless as are idiosyncrasies at present. But now it is well known that the former are but reversions to original types, each abnormality in man being a normal distribution in some lower animal.

Startled by the strange coincidences every now and then met with, we have sometimes dreamed that human idiosyncrasies in regard to drugs are often nothing but similar reversions, each peculiarity in man being the normal susceptibility in some lower animal.

A more important because more certain fact is that those parts of the system which are closely similar in organization and function in different animals are mostly similarly influenced in the different species, and that those which differ are differently affected in the different species. Take as an example the heart, an organ whose function, activity, and nervous supply are almost everywhere the same among the mammalia, and how similarly do viridia, veratria, and the other "heart-

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alkaloids" act on the different species! The same is true of the spinal cord and its nerves. Their functions scarcely vary, nor do their susceptibilities. Woorara never fails to paralyze, nor strychnia to convulse.

On the other hand, the development and functions of the cerebrum differ in every possible degree; and how notorious are the varying effects of those alkaloids that influence it chiefly, such as morphia and atropia! The structure and functions of the digestive tract are widely dissimilar in the omnivora, herbivora, carnivora, ruminants, etc.; and here again we find the same differences in the action of medicines. As an instance, it is only necessary to mention elaterium, an eighth of a grain of which purges man most actively, whilst when given to the dog by the grain it appears to be inert.

Experiments upon animals are, however, by no means simple problems; they must be worked out with care and thought, and the lack of these in some investigations has thrown disrepute upon the method. Patience, carefulness, and brains are as necessary here as anywhere; false results and conclusions must often come even to the best; but we do believe that by the aid of the method of study upon animals modern therapeutics has already entered upon a new life, and that the now faint dawn-streaks shall widen and deepen until they flood us with a noontide splendor.

DR. STILLÉ'S ADDRESS.

IT requires the exercise of no little ingenuity on the part of the President of the American Medical Association to avoid, in the annual address which is expected from him, the discussion of subjects already hackneyed by frequent repetition, or to present these in such a way as to be attractive to his hearers. For this reason the addresses of the various Presidents have been characterized by a sameness which has undoubtedly detracted from the effect they might otherwise have produced. Dr. Stillé has been too much identified with the party of progress in the matter of medical education to ignore the subject; he has, therefore, devoted a large portion of his address to it. Successive Presidents have pointed out year after year the defects in medical education in this country, and the means by which these could best be obviated. Dr. Stillé has done the same, but he has done it so well that he seems to have invested the subject with fresh interest. Although much remains to be accomplished, he believes that the efforts of the association have not been entirely without fruit. "Whoever," he says, "is acquainted with the medical students of thirty or forty years ago, and their opportunities for gaining knowledge, must admit that both have greatly risen in the intellectual scale. Even within the limits of the official curriculum, although the course of lectures may bear the same name, they no longer represent the same things." The great obstacle to improvement has been the rivalry which has hitherto existed among the different schools, a rivalry the effect of which is to prevent any of them from increasing its standard for graduation. The number of medical colleges in this country far exceeds the wants of the population. In the single city of New York there are as many schools of medicine with power to confer degrees as there are in all of France; and Germany, Great Britain and Ireland scarcely contain as many as may be found within the limits of the United States.

The part of Dr. Stillé's address which will excite most attention is that which treats of the woman question. He is evidently no believer in woman's peculiar fitness to practise medicine. We will let him, however, speak for himself.

"Women," he says, "may possibly become persuasive preachers, or even safe practitioners of domestic medicine, but learned and subtle divines, great lawyers, and scientific physicians, never. To reach such an eminence, a knowledge of principles is necessary, a power of eliminating the essential from the accidental, of distinguishing plausible falsehood from genuine truth; and that power has been denied them. It seems very probable that if woman could be made fully to comprehend the difficulties of the professional career, and the vastness and complexity of medical science and art, she would be less eager to become a physician. For her error in this respect physicians are much to blame. It is remarkable that in proportion to the scientific elevation of the medical profession in any place are the female candidates for its honors few in number. They are rare indeed in Paris, London, Vienna, or Berlin, but form quite a phalanx in Edinburgh and Zurich, and in this country swarm through every avenue to the coveted goal. On the continent of Europe they are not excluded either by prejudice or law, and it is, therefore, to be presumed that in comparing themselves with the physicians around them, they are deterred by a sense of incapacity, which perhaps there is less reason for our ambitious countrywomen to feel."

Women have nevertheless the right to study medicine, and to practise it if they can find patients willing to intrust themselves to their care, and have claims upon professional courtesy and assistance, which, Dr. Stillé thinks, should be recognized, provided, however, that in their attempts to obtain a medical education for themselves they do not interfere with its acquirement by male students; and consequently their claims to be admitted to the medical lectures of the schools or hospitals, whenever their presence causes embarrassment to the teacher or restrains his liberty of illustration, cannot be allowed.

There are other matters alluded to in the address, to which at present we have not time to refer; perhaps in some future number we will make them the subject of editorial comment.

NOT APPRECIATED.

WE published, a few weeks since, a communication headed "Microscopical Memoranda, by Dr. Newlenz." So broad was the burlesque contained in every line of it that there seemed room for doubt whether, good as it was, it ought to find admission into the columns of a scientific journal; and only after some deliberation did we decide to let our readers share in the hearty amusement it had afforded us.

We little thought how laughable a supplement the joke was to have. A critic in an "Eclectic" contemporary seriously "shows up" the *soi-disant* Dr. Newlenz

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with his one-seventieth objective, his eccentric parallelopiped, his test-object containing 147,229,073 lines to the inch, and his 20,000 hour-long examinations in a year, and winds up thus:

"We are surprised that the article, which is plainly an advertisement, should receive serious attention from the excellent journal in which it appears."

TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a stated meeting of the Pathological Society, held April 27, 1871, John Ashhurst, Jr., M.D., in the chair,

DR. E. RICHARDSON exhibited a specimen of *hydrocele of the neck*, removed at the University of Pennsylvania, by Prof. Agnew, April 26, 1871, from Mrs. H., æt. 29.

A growth appeared upon the left side of the neck, posterior to the lower portion of the sterno-cleido-mastoid muscle, some time in July last, which was then attended by so little sensation that it was first noticed by her sister. The growth has since that time steadily increased, though more rapidly during the last two months, and for the last four months has been attended by an aching—or, as the patient herself expressed it, "a dragging"—pain.

The tumor at the time of operation extended from the clavicle upwards, and from the sterno-cleido-mastoid muscle posteriorly, and measured over its convex surface 4½ inches vertically and 6 inches transversely. It gave a distinct sense of fluctuation, and by transmitted light was found to be translucent. The skin moved freely over it. The tumor had been treated by irregular practitioners, by application of tr. iodine to the skin, etc., for some months. The operation was performed by making an S-shaped incision through the skin, dissecting it off, cutting through the attenuated platysma myoides and deep fascia, and freeing the tumor from its attachments beneath. It was found to extend under the sterno-cleido-mastoid nearly to the carotid artery anteriorly, and nearly to the subclavian below. The transversalis colli was freely exposed beneath on the removal of the tumor. The walls of the cyst were so delicate that notwithstanding the most careful manipulation they were ruptured during the operation, and about four ounces of a clear yellow fluid escaped, with a little opaque creamy fluid at the bottom of the cyst, giving evidence of lymphatic origin.

DR. J. H. HUTCHINSON presented, for DR. O. H. ALLIS, the specimens from a case of *pseudo-membranous bronchitis*, in which tracheotomy had been performed.

The history was that usual in cases of pseudo-membranous laryngitis, the illness beginning April 16, and gradually increasing in severity until noon of the 21st, when the labored respiration and rapidly sinking condition were thought to demand an operation for their relief. The child did well until early on Sunday the 23d, when it began to sink, and died the next day,—sixty hours after the operation.

At the post-mortem examination, sixteen hours after death, the larynx and upper portion of the trachea were found mottled with white patches, which were not extensive and could not be said to constitute membrane. In the lower half of the trachea and sending prolongations into the bronchi was a distinct membrane, easily detached, and occupying about half the periphery of the tube. The fact that the membrane was thickest and firmest in the bronchi (especially in the left bronchus), taken in connection with the loss of voice only on the fifth day, would point to this region as the origin of the disease. Both lungs bore unmistakable evidence of circumscribed pneumonia.

DR. J. S. PARRY exhibited the body of a boy who was the subject of *general tuberculosis*, involving the *meninges and substance of the brain, the cerebellum, left lung*, and *cervical and dorsal vertebræ;* there was also *right psoas abscess*, and *insufficiency of the mitral and thickening of the aortic valves.*

The boy was seven years old, and was admitted to the Philadelphia Hospital, July 28, 1870, with an appearance of moderate health, but presenting enlargement of the glands of the neck, a slight umbilical hernia, and some enlargement of the abdomen. There was a mitral systolic murmur heard with varying distinctness throughout the chest. Subsequent examination revealed double lateral curvature of the spine, which did not exhibit pain in response to the usual tests.

On February 1, 1871, physical examination revealed greater extent of movement in the walls of the right thorax, and bronchial breathing on the left side from the clavicle to the fourth rib, in front and behind. On April 21 his head was evidently symmetrically enlarged, and about noon of this day he had a convulsion. He died April 22.

Post-mortem examination, twenty-two hours after death. Body much emaciated. Head large in proportion to body. No want of proportion between emaciation of face and body. Belly scaphoid. When the chest was opened and the sternum removed, the lower boundary of the heart was opposite the upper margin of the sixth rib, the upper border opposite the upper border of the second, the right boundary one inch beyond the right margin of the sternum, and the apex one inch without the articulation of the sixth costal cartilage with its rib.

In removing the lungs, heart, and bronchial glands together, an abscess was opened at the base of the neck. This extended upward to the upper margin of the first dorsal and down to the lower border of the fourth dorsal vertebra. On the right it reached to the articulation of the ribs with the vertebræ, but not quite so far on the left. This cavity contained between f℥iss and f℥ij of thick yellow pus and broken-down caseous matter.

The vertebræ projecting into it were much eroded, and the bodies of the third and fourth were destroyed by caries. The caseous matter in this cavity was precisely like that in the bronchial glands.

The bronchial glands were much enlarged, forming a mass as large as a lemon. On section they contained soft cheesy matter, much of it broken down, forming irregular cavities in the centre. In others there was cheesy deposit in a portion of the gland which in some instances had not begun to soften. These enlarged glands projected more towards the left than the right side, and compressed the upper part of the left lung.

Lungs.—The left lung was strongly adherent, except the upper half of the upper lobe, which was free. The right lung was free. The left lung crepitated slightly on section. The upper lobe contained some miliary tubercles. The lower lobe was carnified and covered with old, dense, false membranes. It contained but few tubercles. The upper lobe of the right lung was quite healthy, and contained no tubercles; the lower lobe, in its posterior portions, was congested; its margins were collapsed and contained a few tubercles.

Heart.—At the apex and in contact with the walls of the chest was an irregular patch, three-fourths of an inch in diameter. This was elevated one-eighth of an inch, and was dense, firm, and yellowish-white in color. The whole visceral layer of the pericardium was somewhat thickened, and at the base, and especially over the left auricle, was roughened by previous inflammation. Opposite this point the parietal layer was decidedly rough. The sac was not adherent, and it contained a little clear serum. The weight of the heart and pericardium was seven ounces. The right auricle contained a large decolorized clot. The water test proved the mitral valve to be insufficient. The left ventricle was much hypertrophied; its walls were firm and half an inch thick. The cavity contained a long decolorized coagulum extending up into the auricle. The aortic valves were much thickened, especially at their margins, but their surfaces were but little roughened. Of the mitral valve, the right leaflet and attached tendinous cords were much thickened. At the base of the leaflet and on its ventricular surface was a thick, opaque, oval patch. The mitral orifice was very rough, and large vegetations projected into it. The right ventricle was small, and its walls not hypertrophied. The tricuspid valves and orifice were healthy. the pulmonary artery and valves normal.

Liver.—Weight, one pound four ounces. It projected two and a half inches below the margin of the ribs, and contained numerous miliary tubercles. There was not the slightest trace

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of fatty degeneration. In the fissures on the inferior surface of the organ were numerous enlarged lymphatic glands.

Spleen enlarged, firm, and contained some miliary tubercles and several yellow cheesy masses as large as a pea.

Intestines normal.

Upon removing the intestines, a large *iliac abscess* was discovered, filling the whole of the right iliac fossa. Upon opening this, six or eight ounces of thick yellow pus escaped. The bodies of the vertebræ here were not diseased.

Head.—On removing the calvaria, there escaped a large quantity of clear serum from the base of the brain. There was a considerable quantity in the ventricles. The weight of the brain, after the ventricles had been emptied of their fluid and the dura mater removed, was forty-eight ounces.

At the base of the brain, over the pons Varolii, the optic commissure, and in the fissure of Sylvius, was much recent yellow lymph, in which were numerous miliary tubercles.

On the inferior surface of the right lobe of the cerebellum was a hard, oval, umbilicated spot. On section this proved to be a tubercle,—one inch wide in its greatest by three-fourths of an inch in its shortest diameter. The margins were sharply defined, and it could be easily enucleated from its bed in the brain-substance. It had commenced to soften in the centre.

The substance of the brain was much softened, and the cavities of the ventricles were much enlarged.

At the base of the brain, and in the middle fossa of the skull on the right side, and just behind the lesser wing of the sphenoid bone, there was found a flattened tumor about an inch and a half in diameter. The dura mater over this was healthy. On turning back this membrane the mass was found to be composed of soft caseous and purulent matter. The bone beneath it was dead, rough, and eroded. Opposite this point, upon the exterior of the skull was a flattened projection, and before dissecting up the temporal fascia and muscle a second accumulation of caseous matter and pus was discovered. Beneath this the bone was likewise eroded and rough. There was no actual perforation of the skull, but the bone was very thin at this point.

Dr. S. W. Gross said that one of the most striking examples of this disease had recently been under his observation, in which the curve was towards the left side. With regard to the pain in the back, he remarked that it is by no means invariably present, and that it is so fallacious a symptom that patients might pass through all the stages of the affection without experiencing it. Nor is pain always elicited by percussing the vertebræ, or causing the patient to jump from a chair. The reason of this is in accordance with one of nature's laws, namely, that reparative inflammation is always coincident with destructive inflammation. While caries is going on in the anterior segment of the spine, adhesive inflammation is progressing in its posterior segment, rendering the affected portion rigid and inflexible and unimpressible to slight external violence. He recalled a case in which the bodies of the second, third, and fourth lumbar vertebræ had entirely disappeared in connection with psoas abscess, and not the slightest pain was elicited by pressure or tapping upon the vertebral spines. There was pain, however, in the abdominal region and about the spines of the ilium, of a reflex nature, just as pain in the knee accompanies hip-disease.

Dr. W. W. Keen said he had found in some of these cases that while he could not elicit pain by pressure on the vertebræ themselves, he could by pressure upon the ribs at a considerable distance from their vertebral attachment, thus taking advantage of leverage.

The President asked whether the test of jumping from the chair to the floor had been tried, and also said that the direction of the curvature was unusual.

Dr. Parry replied that this test had been resorted to upon several occasions, and always with the same result. He wondered that he had not done the child serious injury by the severe movements to which he had subjected him. In regard to the direction of the curvature, it must be remembered that it is the result of the abscess in the right psoas and iliac regions, and that on account of the flexure of the right leg the convexity of the dorsal curvature would necessarily be towards the left side. On account of its obscurity, this symptom had particularly interested him. As was distinctly stated in the clinical history just detailed, the primary distortion was in the lumbar region. The hip-joint was therefore carefully examined, and found to be healthy. He then as critically examined the spine, thinking that, though the curvature was lateral, there might be disease of the bodies of the vertebræ; but he could never detect any evidence of it, excepting the slight pain about the umbilicus and the crest of the ilium. The iliac fossa was repeatedly examined, and, as the abscess was behind the intestines, the part was always resonant. This, with the absence of tenderness, misled him.

Indeed, so latent was the disease in the pelvis that the case became very puzzling, and he was at one time almost led to doubt the correctness of his original observation, and to conclude that the dorsal was the primary spinal curvature. This led him to carefully examine Mr. Richard Barwell's views of the mechanism of these distortions.* This authority says that the curve is the result of over-action of the serratus magnus muscle upon the healthy side in pulmonary affections. The result is that the ribs are elevated and curved backward by this muscle, and these act as levers upon the bodies of the vertebræ, and produce the distortion which is always towards the sound side in respirative disorders. In this case, however, the convexity of the curvature was in the opposite direction, *i.e.* towards the left or compressed lung, and away from the sound or right one. Thus the case supported Mr. Barwell, and he was hence forced to believe the cause of this symptom to be seated in the spinal column or pelvis; but until the post-mortem, he is free to say, its true nature was not discovered.

The tumor of the cerebellum was referred to the Committee on Morbid Growths, who reported, May 11, as follows:

"The committee have carefully examined the morbid growth in the right lobe of the cerebellum, presented by Dr. Parry at the last meeting of the society. It is an irregularly rounded mass, about one inch in one direction by three-quarters of an inch in a direction at right angles to it. On section, the outer layers appear firm, but the inner soft and grumous. The microscope shows that it is a tuberculous nodule, presenting in the softened centre granular matter, débris of cells, free nuclei, and some feathery crystals of margarine,—in short, the usual appearances of tubercle in a state of caseous degeneration. Portions from the outer layers of the growth present the well-known irregularly rounded and granular tubercle-cells, some with one, others with two, nuclei. The most interesting point presented by the specimen is, however, in the opinion of your committee, the state of the small arteries and capillaries. In them may be studied to advantage the first commencements of tuberculous growth. Between their adventitia and inner coats are to be found rounded protuberances, in some of which are spindle-shaped granular cells, in others irregularly rounded granular cells, with one, two, or occasionally even more nuclei. Other portions of the vessels here are healthy, while in others, again, the entire fibrous coat is thickened and distended by a continuous new growth. In short, it presents a fine opportunity to study the development of tubercle; and for a more minute and detailed account, your committee would respectfully refer to the specimens afforded by this, and to the masterly descriptions of Rindfleisch and other writers on pathological anatomy."

Dr. Jos. G. Richardson exhibited part of the *arch of an aorta*, showing decided *contraction at the semilunar valves*, and remarked that it possessed some interest as a practical illustration of what we all know so well, that a serious cardiac lesion may give rise to physical signs so slight that they can readily be overlooked during a superficial examination.

Jesse C., the patient furnishing the specimen, a brick-maker, aged 45 years, applied at the dispensary of the Episcopal Hospital, March 13, 1871, for the relief of dyspepsia and pain in the left side. On palpation, the apex-beat was found in its normal situation; the impulse seemed rather feeble for a hypertrophied organ. On auscultation, the first sound appeared to be normal, but the second was preceded by a short, faint, but harsh systolic murmur, audible at the base of the heart, and transmitted for about an inch and a half upward along the ascending aorta. In the belief that constriction of the aortic orifice existed, the patient was earnestly warned against severe or prolonged exertion.

On the 22d of April my friend Dr. S. R. Knight, Superin-

* Lateral Curvature of the Spine, 2d ed., London, 1870.

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tendent of the Episcopal Hospital, very kindly sent me the specimen, with a few memoranda in regard to the case. The man died on the 20th instant, and at the autopsy the lungs were found quite healthy, as were also the liver, spleen, stomach, and intestines; the heart showed evidence of fatty degeneration. About two years ago he was insured in the —— Life Insurance Company, and his friends informed Dr. Knight that the examining physician was perfectly satisfied, and marked him A No. 1; also, that on the day of his death he consulted a practitioner near his residence, who, after a minute investigation, told him that there was nothing the matter with his heart, but that he was troubled with dyspepsia, which could soon be relieved.

The heart was found hypertrophied in a marked degree; and under the microscope its muscular fibres proved to have undergone decided and, in some instances, extensive fatty degeneration.

On examining the specimen, it will be seen that the posterior leaflet of the aortic valve is nearly normal, but that the right lateral leaflet is thickened at its anterior attachment, and so distorted by contraction at this extremity that its corpus Arantii occupies a position near the junction of its anterior and middle thirds instead of at the centre of its free margin. An interstitial hyperplasia in the wall of the aorta (apparently of some months' or years' standing) has thickened it to about the diameter of four lines, and so encroached upon the lumen of the vessel as almost to obliterate two of the sinuses of Valsalva, and even to cause a decided projection at and above the anterior attachments of the right and left lateral valvular leaflets.

The coronary arteries, whose origins are involved in the diseased portion, seem to be much contracted, a fact which may serve to account, in part at least, for the existence of fatty degeneration in the muscular fibres of the heart. It appears probable that the first effect of the new formation in the walls of the aorta was to diminish slightly the calibre of the great blood-vessel itself, and so, by obstructing the circulation, to stimulate the heart to excessive action, resulting in its moderate hypertrophy; afterwards, as the intramural deposit extended, it compressed the coronary arteries, and, by cutting off a part of their supply of blood, led to the fatty change of the muscular fibrillæ through impaired nutrition.

DR. JAMES C. WILSON presented the specimens from a case of *traumatic stricture of the urethra*, and read the history, published in the *Hospital Notes* of the present number of this journal.

DR. H. LENOX HODGE exhibited a *fœtal monstrosity presenting protrusion of the abdominal contents*, which was referred to a special committee, who were directed to examine and accurately describe the fœtus. They reported, May 11, as follows:

"The child was born at or about full term, and died without respiration having been established.

"The *head* was rather large, and the bones separated one from another by reason of hydrocephalus.

"The *chest* was small and not well developed. The anterior walls of the *abdomen* were absent, and the *liver*, *stomach*, *spleen*, *small intestines*, *large intestines*, and *bladder* protruded externally. The umbilical vein and hypogastric arteries united to form the cord a little anterior to the abdominal contents. The anterior walls of the *bladder* were wanting, only the posterior wall remaining. This condition, therefore, constituted what is known as extroversion of the bladder. An injection thrown into the *ureter* was seen to issue from a pin-hole orifice on the posterior surface of the bladder. The ureter from the right kidney as it approached the bladder became very much dilated, and tortuous like an intestine. Its size was as large as a man's finger. Above the bladder there was a sac with a rugous surface within, and about one inch in diameter. At the upper border of this sac the small intestine freely opened, so that whatever was injected into the small intestine below the stomach passed out at this orifice. The *large intestine* was much distended with gas, and an injection into it found no outlet. A little in advance of the normal position of the *anus* there was an indentation, but no passage leading from it could be found. Just in front of it there was another depression, but communicating with no canal. At a distance from these, and close to the thighs, were folds of skin like the labia. There was also a projection below the bladder, like a clitoris. The pelvic bones were not united in front, but held together by ligament. The hiatus in the abdominal walls extended rather farther on the right side than on the left, so that the right kidney could be seen through the membranes.

"There was a *spina-bifida* in the lumbar region, and there were *club-feet* on both lower extremities, which were so much everted from the pelvis that the toes pointed backwards."

DR. J. E. MEARS exhibited an *eyeball*, which he had extirpated for *staphyloma corneæ*, the result of an attack of ophthalmia neonatorum.

The patient, a child seven years of age, complained of severe pain in the affected eye, and had at times discharges of fluid described as purulent. In this case it was deemed advisable to perform the operation of extirpation of the eyeball, in preference to the usual one of shaving off the staphyloma. It was removed entire, and has been kept for some weeks in a solution of bichromate of potassa, by means of which it has been hardened. A section of the globe showed marked thickening of the cornea, obliteration of the chambers, and destruction of the crystalline lens and iris. Portions of the iris could be detected attached at points to the posterior surface of the cornea.

DR. H. ALLEN (through kindness of Dr. JOHN S. PARRY) exhibited a specimen of *cystic tonsil*. The gland was obtained from the body of a boy about fourteen years old, the subject of cranial hyperexostosis. This disease was more marked on the left than on the right side; and it is of interest to note that the diseased gland was on the same side. The specimen consisted in great part of a sac whose opening of about a line in diameter presented on the faucial surface. Upon the upper portion of the sac a small portion of the original gland-tissue remained. The right tonsil was healthy, though slightly enlarged. No involvement of the lymphatic glands accompanied this exceptional condition.

The specimens were referred to the Committee on Morbid Growths, who reported, May 11, as follows:

"The tonsils presented by Dr. Allen show the marks of chronic inflammation, the interfollicular connective tissue being slightly increased and indurated. The follicles of both tonsils, instead of presenting the usual oval or round shape, were distended into large, irregular, star-shaped crypts.

"In these crypts, where the contents had not been previously evacuated, were found retained masses of disintegrated epithelium, fat-granules, and crystals of cholesterine.

"The occlusion of the orifices of the glands and the retention of their secretions have given rise to the formation of the cysts.

"Virchow, in his work on Tumors, vol. ii. p. 612, mentions the not infrequent occurrence of this distention of the follicles of the tonsils both in hypertrophy and atrophy, but does not bring them under the classification of cystic formations."

REVIEWS AND BOOK NOTICES.

CODE OF HEALTH OF THE SCHOOL OF SALERNUM. Translated into English Verse, with an Introduction, Notes, and Appendix. By JOHN ORDRONAUX, LL.D., M.D., Professor of Medical Jurisprudence in the Law School of Columbia College, etc. 12mo, pp. 167. Philadelphia, J. B. Lippincott & Co., 1871.

We hail the appearance of the volume before us with infinite pleasure. It does honor to the author, and must be regarded as a most valuable addition to the medical literature of our country.

It is a source of gratification to every lover of our profession to find that we have among us colleagues who, while possessing the advantages resulting from a thorough classical education, have not thought it useless to store their minds with the writings of our professional ancestors, and are thereby able to form a better idea than they could otherwise do, of the revolutions which the science they cultivate has undergone, of the biographies of the men who have at various periods advanced it, of the rise and progress of the schools

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where it was taught, and, above all, of the progress which has been made in the cure of disease.

Not less gratifying is it to us, that the author of the present volume, who holds a high rank among such physicians,—the number of whom, we are sorry to say, is "small by degrees and beautifully less,"—has had the happy thought of giving a good translation of a work of great antiquity, and which has never ceased, since it first made its appearance, to be held in veneration by medical men of every civilized nation of the world. To this translation the learned author has prefixed an historical sketch of the School of Salernum, the details which led to its formation, and the changes it underwent in the progress of time.

The School of Salernum deserves the particular notice of the medical reader, as well on account of its antiquity, and the important services it rendered the science of medicine, as for its high reputation,—attaining rapidly a degree of splendor from the tenth to the thirteenth centuries, knowing no equal in any part of Christendom, among those schools which had been founded after the downfall of the Roman Empire. This praise, though high, is in every way merited. For however imperfect it may have been in point of organization at its origin, and however true the charges brought against the members of the faculty by Ægidius Corboliensis—himself a distinguished pupil of the school—and others, of having more regard to the intervention of relics and religious superstitions than to scientific processes, it yet must be conceded that the School of Salernum, after the destruction of the great school of Alexandria, was almost the only preserver of professional knowledge in Western Europe during what has been called the dark ages, *i.e.* from the time which elapsed between the disappearance of educational institutions, to their re-establishment in various parts of Italy, France, and Germany. It served as a link between these two periods, and afforded, especially during and after the eleventh century, greater opportunities for the acquirement of useful medical knowledge than could be obtained in monasteries,—even in that of Monte Casino, which, though never possessing a regular and distinct faculty, or assuming the character of a well-organized academy, nevertheless enjoyed a pre-eminent reputation from its original establishment by St. Benedict in the sixth century, at first as a sort of infirmary for the cure of disease, and subsequently as a place where medical instruction could be obtained, and which during the tenth, eleventh, and twelfth centuries enumerated among its members teachers of eminent abilities, who attracted a large number of pupils to the monastery, and enriched the medical literature of the period with original works, and with translations from the Greek and Arabic languages.

The interest thus deservedly excited by this venerable institution will, we trust, justify our taking advantage of the present occasion to offer a short sketch of the history of the School of Salernum,—taken mainly from the account of it given by Dr. Ordronaux, and from that for which we are indebted to Dr. Daremberg, the learned editor of the French translation by M. de Saint-Màrc, published in Paris in 1861, and to Sir Andrew Croke's prefixed by him to the edition which appeared at Oxford in 1830. We have also used freely the elaborate essay which Ackermann has given in his edition of the book published in 1790, and various reprints of the poem,—very fine and rare editions of which are contained in the Lewis portion of the rich library of the College of Physicians of Philadelphia.

As a school of medicine, consisting of a regularly appointed body of teachers, and intrusted with the duty of granting degrees to successful candidates with permission to practise, its origin may be traced back certainly to the ninth century, if not to an earlier date; but there is every reason to believe that long before this Salernum—the salubrious climate of which had been eulogized by historians and sung by Horace—was visited by invalids who sought there relief from their sufferings, and contained a number of skilful and learned physicians, who, while attending to the duties of their profession, occupied a portion of their time in teaching, independently of one another, the several branches of medicine. But, with all this before us, if we endeavor to ascertain at what precise time and by whom the school was instituted, as also the names and writings of its earliest teachers, we are forced to admit that little is known. An early historian and eulogist of Salernum, Ant. Mazza, quoting from an ancient manuscript, informs his readers that the school was founded—at what time is not stated—by four individuals, Robanus Helenus, a Jew; Pontus, a Greek; Adela, a Saracen; and Salernus, a Latin, who taught medicine in their respective languages. But all this is evidently nothing but a legend, or a personification, as it were, of the four elements which were supposed to exist in the Salernitan doctrines. "The common opinion," says a recent writer, "carries us back to the epoch of the destruction of Alexandria by the Arabs. It is pretended that after that mournful event for the sciences, the teachers of philosophy and medicine, who were very numerous in that city, were scattered in different countries; that some sought refuge at Salernum, where they laid the foundation of a medical school, which grew rapidly." Others, again, attribute its origin to a number of Hebrew, Arabian, and Christian physicians, the latter of whom were monks, who having studied in the Arabian schools of Spain returned to their country, and there assumed the task of imparting to others the knowledge they had obtained abroad.

But on all this much uncertainty exists, while we may with perfect safety deny the correctness of the statement of Friend relative to the origin of the school, when he tells us that "so great was the renown acquired by the place as a seat of medical learning, and such the number of individuals collected there to obtain professional instruction," that Charlemagne "thought fit to form a college there in 802,—the only one of the kind in Europe." To this it has been opposed, not only that the School of Salernum was in existence before the time of Charlemagne, and was not instituted a university till long after, but that the city was never in his possession, and that therefore he never could have exercised any agency in the establishment of its institutions.

In relation to this uncertainty, and the long-mooted question whether the school was ecclesiastical or lay, Dr. Ordronaux thinks that it is hardly worth while to open any discussion. Suffice it to know that it is a fact no longer to be gainsaid that as early as the time mentioned a "school of medicine existed at Salernum; that it flourished, and was the acknowledged head of all European medical academies during the middle ages. In proof of the high standing of that school, and the reputation enjoyed by its professors and physicians for practical skill, the author recalls the fact that, as early as 984, Adalberon, Bishop of Verdun, is recorded to have visited Salernum for the purpose of obtaining medical advice; that in 1050 the Abbot of Monte Casino, Desiderius, afterwards known as Pope Victor III., also came there for the same purpose; and that Peter Damiens, writing about the same time, mentions, in terms of high praise, Gariopuntus, one of the masters in its school, as an aged philosopher greatly skilled in medical lore." "Romualdus," he adds, "writing in 1075, speaks emphatically of the high renown already achieved by Salernum, of which place he had not only been archbishop, but had also obtained a wide reputation as a skilful practitioner of medicine. The archives of the Neapolitan kingdom contain the names of Salernitan physicians of as early a date as 846. Whenever the school is mentioned by medical writers, it is always spoken of reverentially, because of its great antiquity." Let it be remarked, in addition, that it is certain that the texts of the eleventh and twelfth centuries accord in proving that the school was already very ancient. We must, besides, recollect that the very title of *school*, by which the institution was designated, was in the language of the time applied to an association of learned men officially intrusted with the duties of teaching. Hence, as Mr. Daremberg has well said, it could not have been used to mean a number of isolated physicians teaching independently of one another, but a regular medical institution, the members of which took the name of MASTER,—the title of doctor not being introduced before the thirteenth century. From the year 1000 to the year 1050 the names multiply; and the professional works which have reached us give the strongest proofs of the rapid development the school had made, even previous to the arrival of Constantine the African, who, though entitled to great credit for the numerous works he issued both at Salernum and Monte Casino, where he finally retired, was in no way instrumental in establishing the school or raising its reputation, as has been stated by Ackermann and other historians.

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Until a comparatively recent period, but a limited number of the works composed by Salernitan physicians were known, and little was thought or said by medical historians of the character of the school, which was generally regarded as of too little importance to merit much attention. In this respect matters have assumed a different turn, thanks to the good fortune and industrious researches of a few learned medical antiquaries. In 1837, Dr. Henschel, the learned professor of medicine in the school of Breslau, discovered in the library of that city a fine manuscript of the thirteenth century, labelled *Herbarium*. The volume contained not less than thirty-five treatises, all of Salernitan origin, and embracing every department of medical science, except surgery. Several of these treatises were already known, but the majority were new. The second of these is entitled *De Ægritudinum Curatione*, and is composed of 173 chapters. It constitutes, as we are told by M. Daremberg, a sort of encyclopædia,—a true medical *summum*, similar to those of Oribasius, Aetius, and Paulus Egineta,—a series of extracts taken from a large number of named Salernitan masters, some of whom were already known, but the greater number had never been heard of before. Since the discovery of this collection by Dr. Henschel, many other Salernitan writings have been added to the list by the indefatigable and learned Dr. De Renzi, of Naples, who ransacked the archives of that city. The celebrated scholar Dr. Daremberg, of Paris, also made important discoveries at Venice, Vienna, Cambridge, and Basle. Both these writers have combined in editing and publishing at Naples an ample collection of these writings in five octavo volumes, under the title of *Collectio Salernitana; ossia Documenti inediti, e Trattati di Medicina appartinenti alla Scuola Medica Salernitana, etc.* This collection embraces the works discovered by them, and such of those discovered by Dr. Henschel as had not been published or were not known to exist in manuscript.

As time progressed, the organization of the school was modified, under the emperor Frederick II. It was raised to the rank of a University, with a regular faculty of ten professors, who succeeded each other according to seniority. "The statutes of the college," as Dr. Ordronaux tells us, "are remarkable for the jealous guardianship which they exercised over the purity and proficiency of candidates for medical degrees." The school selected for its patron St. Matthew, and for the motto on its seal the words "*Civitas Hippocratica*." The examination of candidates was conducted with great strictness, and consisted in expositions either of Galen's Therapeutics, the first book of Avicenna, or in the Aphorisms of Hippocrates and the Analytics of Aristotle. If successful, the candidate received the title of M.A. and Physician,—*Magister Artium et Physices*.

Before presenting themselves for admission for examination at the school, candidates for graduation were required to have gone through, during three years, a course of instruction on philosophical and literary subjects. They were obliged to be of *legitimate birth* and twenty-one years of age, and to furnish proof of having studied medicine during seven years. But even then the degree thus obtained did not authorize the recipient to practise indiscriminately every branch of the profession; for if he desired to practise surgery he was obliged, in addition, to apply himself for a whole year to the study of anatomy. To this let it be added that every one, whatever might be the branch he proposed to practise, was obliged to swear that he would "be true and obedient to the society of physicians, to refuse all fees from the poor, *and to have no share of gains with apothecaries*. A book was then put into his hand, a ring upon his finger, his head was crowned with laurel, and he was dismissed with a kiss."

It may be mentioned in connection with the subject that anatomy was taught by means of the dissection of hogs and by the descriptions contained in the works of Galen, and that the student engaged in such pursuits was also obliged to familiarize himself with the mode of performing surgical operations on the human body.

These statutes were modified from time to time. By one promulgated in the reign of the emperor Frederick, grandson of Roger, the candidate for graduation was obliged, before receiving his degree and a license to practise, to have studied five years medicine, as also surgery, which, as the statute states, constitutes a part of medicine; and after that he was, moreover, obliged to receive practical instruction from some old and experienced physician,—a circumstance which seems to indicate that clinical medicine, properly so called, formed no part of the regular course of instruction obtained in the school.

But, in whatever way these statutes were modified, the spirit of rigid honor and medical orthodoxy in which they were cast was never abated or lost sight of to the last. The fees of practitioners were fixed by law and duly regulated according to time and distance.

The school retained the pre-eminence it had so long and deservedly enjoyed, till the same emperor Frederick who had, as Dr. Ordronaux remarks, legislated so wisely in his ordinances regulating medical instruction and practice, dealt a fatal blow to it by the establishment of a rival academy at Naples. Other kindred institutions besides *that* were soon established at Bologna, Padua, Piacenza, Rome, Montpellier, Paris, and other places more accessible to students, and which also presented a larger field for professional instruction, and thereby tended to lessen the attractions that Salernum had offered for so long a period. Hence from that moment the active life of the school began to decline; and, after struggling for more than a century against these adverse influences, it dwindled down to a mere provincial school, and finally disappeared and was forgotten. "Thus died the venerable and venerated mother of all Christian medical schools, amid the splendors of a meridional civilization of which, in her own department, she had been the day-star and the morning glory."

BOOKS AND PAMPHLETS RECEIVED.

Address of George Bentham, Esq., F.R.S., President. Read at the Anniversary Meeting of the Linnæan Society on Friday, May 24, 1867. Pamphlet, pp. 24.

Dynamics of Nerve and Muscle. By Charles Bland Radcliffe, M.D., F.R.C.P., etc. etc. 8vo, pp. xii., 288. London, Macmillan & Co., 1871.

GLEANINGS FROM OUR EXCHANGES.

THE PATHOLOGY OF THE FLOATING KIDNEY.—Dr. Rud. H. Ferber reports in *Virchow's Archives* (vol. lii. p. 95) two cases of floating kidney, and makes a few remarks on the pathology of this affection. In one of his cases the patient had a severe fall upon his back, and he is disposed to think in most cases of movable kidney that inquiry will show that the patient has at some time or other received an injury to his back. If from any cause the cellular tissue about the kidney or the duodeno-renal ligament becomes relaxed, the organ is then retained in its place only by the large blood-vessels; and if the peritoneum is at the same time yielding, it will move freely about the abdomen, its movements certainly being restrained only by the blood-vessels and the ureters. In young subjects the kidney will sometimes be found in the true pelvis, but it is rare that the tissues are so yielding in older people. In the second of his cases Dr. Ferber attributes the displacement to fright. This, as is well known, occasions an increased secretion of urine, and consequently a congested condition of the kidney and an increased weight.

Dr. Ferber's first patient was only sixteen years old; which is younger, he says, than any other patient whose case is reported. The affection is much more common in women than in men, for in nine only out of fifty-nine cases the patients were men. Sometimes the displacement of the kidney gives rise to considerable disturbance of nutrition, as in the first case reported in Dr. Ferber's paper, in which pyelitis was set up in consequence of irritation; and sometimes to pressure upon the various nerve-plexuses in the abdomen.

Dr. Ferber takes occasion to recommend the preparations of lead in pyelitis, and says that in both his cases great general improvement followed the drinking of the blood of oxen.

TREATMENT OF NOCTURNAL INCONTINENCE OF SEMEN.—Dr. J. B. Bradbury, in the course of some clinical remarks (*Brit. Med. Journal*, April 8, 1871), after alluding to the

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value of chloral in the treatment of nocturnal incontinence of urine, takes occasion to call attention to the value of this remedy in a closely allied functional disorder, viz., spermatorrhœa. He agrees with Trousseau in thinking that in many cases of this affection, semen is ejected simply in consequence of the excessive contractility of the vesiculæ seminales, which are frequently in a state of erection. It is not uncommon to find that persons who are troubled with nocturnal incontinence of urine in boyhood suffer from nocturnal incontinence of semen when they have arrived at the age of puberty; and occasionally the two affections may coexist in the same person. Two cases are reported in which a cure is said to have been effected by the administration of fifteen grains of chloral every night. "Whenever, therefore," he says, "there is reason to believe that nocturnal urinary and seminal incontinence are due to spasm, hydrate of chloral will be found a most serviceable drug in their treatment, in consequence of the acknowledged power of this drug of allaying spasm, as observed in tetanus and other spasmodic disorders." He claims for chloral the following advantages over belladonna in the treatment of these affections: 1. That the effect of belladonna is not so immediate, frequently taking weeks to produce any marked control over the disease, whereas the influence of chloral hydrate is most rapid, the malady frequently disappearing after the first dose of the remedy; 2. That belladonna sometimes induces profuse diarrhœa, a result which is never produced by chloral; 3. That belladonna, when pushed to the extent to which it is necessary to be really efficacious, not unfrequently impairs vision, which is not the case with chloral hydrate; 4. That belladonna sometimes failed to be of any service.

In concluding, he says that he has not tried chloral hydrate as a remedy in epilepsy; but he is of opinion that it will be found useful in the treatment of some forms of this affection, believing, as he does, that there is a close similarity between epilepsy and nocturnal enuresis.

Lymph-Spaces of the Cornea.—Dr. Genersich, of Pesth (*The Academy*, March 15, 1871), has a paper in *Stricker's Medizinische Jahrbücher*, Heft i., on this subject. When the cornea is treated with nitrate of silver, there are seen in it with the microscope certain irregularly stellate bodies with long anastomosing processes, light on a dark ground. These are the Saftkanälchen of Recklinghausen, and are considered by him spaces from which the lymphatic canals of the cornea take origin. These silver images are, however, by Schweigger-Seidel believed to be post-mortem products due to changes in the reagents employed in preparation; but Dr. G.'s observations tend to confirm Recklinghausen's views. He first inflamed the cornea, and found that the Saftkanälchen shortened their processes and became rounder, much like the connective-tissue corpuscles in Stricker's own observation. This alteration of form under inflammation he believes to be an argument against the silver images being artificial products. He next took corneæ intensely stained with silver and placed them in the lymph-sacs of living frogs, and examined them, after five or six days, with Hartnack's No. 10 immersion lens. The tissue was, as usual, full of leucocytes or wander-cells which had made their way into it. He also saw them moving within the Saftkanälchen, and saw them pass from one stellate space to another along the narrow channels of intercommunication. In no case did he see a leucocyte pass the boundary of a Saftkanal. He also observed in one case the entrance of a second leucocyte into an already occupied stellate space: the two leucocytes fused together, forming one large mass, which subsequently divided into two, and one part made its way out of the space.

Subcutaneous Injection of Ergotin in Uterine Diseases.—Dr. Von Swidersky (*Berliner Klinische Wochenschrift*, No. 50, 1870; from *Brit. Med. Journal*, February 4, 1871, p. 123) states that he has employed subcutaneous injection of ergotin in chronic metritis, uterine displacements, and metrorrhagia, with satisfactory results. Severe bearing-down pains are often produced, from within half an hour to two hours after the injection, and continue for some hours. The following forms of injection were used: 1. Aqueous extract of ergot, 2.5 parts; rectified spirit and glycerine, of each, 7.5 parts. 2. Aqueous extract of ergot, 2 parts; rectified spirit, 5; glycerine, 10. 3. Aqueous extract of ergot, rectified spirit, each, 2.5 parts; glycerine, 12.5. 4. Aqueous extract of ergot, 1 part; rectified spirit, 1.5; distilled water, 4.5; glycerine, 3. The solutions 3 and 4 are used in chronic cases; 1 and 2 where a rapid effect is required.

Sugar in Urine.—Prof. Almen, of Stockholm (*Apoth. Zeitung*, 1871, No. 4), observed that urine of patients who have taken oil of turpentine contains sugar, which disappears after the oil of turpentine has been discontinued for a day. After the use of turpentine (12 grains daily) a mere trace of sugar was observed. No reaction for sugar was obtained after the use of copaiva and cubebs (*Amer. Jour. of Pharmacy*, May, 1871).

On Anti-Peristaltic Movements.—M. Engelmann and G. v. Brakel (*The Academy*, March 15; from *Pflüger's Archiv*, Band iv. p. 33) show that, notwithstanding the statements to the contrary sometimes made, anti-peristaltic movements may easily be rendered visible in the intestines and ureters of animals recently dead. Engelmann opened the abdominal cavity of a cat that had just been killed, and found the intestines absolutely quiescent; but on seizing and pinching a fold of intestine, a wave of contraction was observed to be propagated peristaltically to the ileo-cœcal valve, and anti-peristaltically to the pylorus from the point irritated. Both waves travelled at the rate of about 1½ inches per second. Many other experiments by M. Brakel on the ureters and uterus, as well as various parts of the intestinal canal of animals, as rats, mice, pigeons (especially wild), frogs, rabbits, etc., conclusively demonstrated that, in all membranes composed of smooth muscular tissue, whenever peristaltic contractions can be induced anti-peristaltic contractions may also occur.

MISCELLANY.

Death of M. Longet.—This celebrated physiologist, member of the French Institute and of the French Academy of Medicine, died at the age of sixty-eight, at Bordeaux, a few days since. M. Longet is the author of works on the nervous system which explain many of his own discoveries. His death was sudden, and was referred by his friends to the horror with which he was stricken upon hearing the sad news from Paris.

Death of Professor Oppolzer.—It is with extreme regret that we announce the death of this distinguished clinical teacher, which took place on Sunday, April 16, of typhus fever. As late as the Tuesday preceding his death he was lecturing in the wards in which, as Senior Professor of Clinical Medicine, he had just succeeded Skoda. Although not so widely known as the latter, he was a much more popular lecturer: his lectures were consequently much better attended, and he will be long remembered by physicians, both here and in Europe, who had the good fortune to hear them. Prof. Oppolzer, besides being a contributor to periodical medical literature, was the author of *Lectures on Special Pathology and Therapeutics*, which our readers will remember were very favorably noticed in the columns of this journal. Like many of his colleagues in the Vienna School, Oppolzer was not a German, having been born in Bohemia. He was excessively devoted to the interests of the students, and frequently spent two or even three hours in the wards or dead-house, for he made it an invariable rule to witness the autopsies of patients who died in his wards. He was about sixty-three years of age at the time of his death.

Alleged Malpractice.—A Cairo newspaper contains the particulars of a suit recently brought against Dr. Wardner, of that city, to recover damages in the sum of $10,000 for

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alleged malpractice by the defendant in the treatment of a very complicated injury of the plaintiff's arm. By the newspaper account it appears that "the radius was fractured obliquely in the lower part of the middle third, the head of the radius dislocated forward upon the humerus, the external condyle of the humerus was broken and slightly displaced outwards, the ligaments and tissues about the elbow-joint badly torn, and the lower end of the ulna was thrust downwards, causing a stretching or rupture of the radio-ulnar ligaments at the wrist, including the sacciform membrane." With an injury so extensive, it is not surprising after union had taken place that there should be some interference with the movements of the elbow and wrist joints, and some deformity left. The treatment was, moreover, fully approved of, and pronounced to be in strict accordance with the highest authority, not only by the physicians of the vicinity, but by Professors Gross, Hamilton, Eve, Davis, and others, whose depositions in the case had been taken. Each medical witness examined, whether on behalf of the plaintiff or the defendant, stated that from the character and extent of the injuries, judging of them, not from the diagnosis of the defendant, but from the appearance of the arm at the trial, the result was as good as could reasonably be expected. The article concludes with the following sensible remarks: "It may be well, and profitable too, for all to learn that a physican or surgeon, unless by special warranty, does not contract to effect a perfect cure; and the fact, however apparent, of a partial failure, is no evidence of want of skill or improper treatment."

Appointments at Home and Abroad.—Mr. Bryant has been elected Surgeon, and Mr. Davies Colley Assistant-Surgeon, to Guy's Hospital. Mr. Cock has been elected Consulting Surgeon.

Professor Liebermeister, of Zurich, has been chosen to succeed the lamented Professor Niemeyer, of Tübingen.

Dr. Wm. T. Lusk has been appointed Professor of Obstetrics and Diseases of Women, and Dr. E. L. Keyes, Lecturer on Dermatology, in the Bellevue Hospital Medical College.

Dr. E. L. Janeway has been appointed Professor of Pathological Anatomy in the medical department of the University of New York.

Dr. Richard Inglis has been appointed Professor of Obstetrics in the Detroit Medical College. Professor E. W. Jenks, the former incumbent, retains the chair of Diseases of Women and Children.

How Medicine flourishes under the Commune.—It is of course natural that, in the condition of affairs in Paris at the present time, there should be little or no medical news; but a Paris correspondent of the *Medical Times and Gazette* gives a most woeful account of the attempts of the Commune to manage medical schools, hospitals, ambulances, and the like. It appears that the Medical School has been closed, because none of the professors were willing to be dictated to by M. Naquet, the new Dean appointed by the Commune. In order that education might not suffer, a decree has been issued calling upon the physicians of each district to assemble at their respective Mairies on Saturday, April 22, and elect two delegates from every district; for the medical students to gather at the School of Medicine on the same day, and elect ten delegates; and for the so-called *Professeurs libres* to consult with their colleagues, Drs. Dupré and Rambaud, two disappointed private teachers of anatomy, and elect three delegates These chosen representatives were then to meet the following day, and draw up a plan of reorganization for the Medical School, which plan was afterwards to be submitted to those members of the Commune now representing the former *Ministre de l'Instruction publique*, and, finally, to be voted upon in a public meeting by the whole Commune. Field-surgeons are said to be in great demand, and a gentle warning has been issued to the medical staff, who some months ago, in an honest war, were attached to battalions which are now fighting for plunder, that if they absent themselves from their duties they will be considered deserters and punished accordingly.

The principal surgeon of the federal army is a Dr. Courtillier, a distiller of perfumes. Every effort is made by the Commune to conceal their losses; but it is well known that the number of admissions to the hospitals is very large.

Mortality of Philadelphia.—The following reports are condensed from the records at the Health Office:

	For the week ending May 13.	May 20.
Consumption	39	30
Other Diseases of Respiratory Organs	28	32
Diseases of Brain and Nervous System	37	43
Diseases of Organs of Circulation	18	20
Diseases of Abdominal Organs	26	23
Zymotic Diseases	11	20
Debility	17	22
Marasmus	8	8
Cancer	2	6
Scrofula	3	1
Tetanus	0	1
Syphilis	1	2
Intemperance	3	0
Casualties	7	11
Old Age	9	12
Stillborn	17	15
Insanity	1	0
Suicide	0	1
Unclassifiable	9	5
Unknown	2	2
Totals	238	254
Adults	134	138
Minors	104	116

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 5, 1871, TO MAY 18, 1871, INCLUSIVE.

McLaren, A. N., Surgeon.—By S. O. 103, Headquarters Department of the East, May 17, 1871, granted leave of absence for 30 days.

Byrne, C. C., Surgeon.—By S. O. 99, Headquarters Department of the East, May 12, 1871, granted leave of absence for 30 days.

Woodhull, Alfred A., Assistant-Surgeon.—By S. O. 83, Headquarters Department of the Missouri, May 8, 1871, granted leave of absence for 30 days, with permission to apply at Headquarters Military Division of the Missouri for an extension of 30 days.

Gibson, J. R., Assistant-Surgeon.—By S. O. 100, War Department, A. G. O., May 13, 1871, relieved from duty in the Department of the Missouri (District of New Mexico), and to report in person to the Surgeon-General for assignment to duty.

Middleton, P., Assistant-Surgeon.—By S. O. 97, Headquarters Department of the South, May 10, 1871, granted leave of absence for 30 days, on condition that he provide proper medical attendance for the command during his absence.

Carvallo, Carlos, Assistant-Surgeon.—By S. O. 89, Headquarters Department of Texas, May 6, 1871, to accompany troops from Jefferson, Texas, to Fort Richardson, Texas, and, on his arrival there, to proceed to Fort Griffin, Texas, and report for duty as post-surgeon.

Loring, L. Y., Assistant-Surgeon.—By S. O. 85, Headquarters Department of the Missouri, May 10, 1871, assigned to duty in the field with Sixth United States Cavalry, near Fort Hays, Kansas.

Dickson, J. M., Assistant-Surgeon.—By S. O. 79, Headquarters Department of the Platte, May 11, 1871, relieved at Fort Sedgwick, Colorado Territory, and assigned to temporary duty at Omaha Barracks, Nebraska.

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THE MEDICAL TIMES.

THURSDAY, JUNE 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF PROGRESSIVE MUSCULAR SCLEROSIS (PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS OF DUCHENNE).

Delivered May 13, 1871,

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania; Attending Physician to the Philadelphia Hospital, and to the Children's Hospital.

W. E., æt. 20, was admitted to the Philadelphia Hospital, April 19, 1871. He was born in Virginia, and has resided there or in the District of Columbia until the present time. His parents are both dead,—his father from cholera, his mother from some unknown cause. He had two sisters and a brother, all of whom are dead,—two from unknown causes; but one sister had paralysis (apparently hemiplegia), and was unable to walk for some time before her death. The patient himself was a delicate and weakly child so far back as he can recollect. He never suffered either from malaria or rheumatism. He was engaged in the country on a farm, and his strength was overtasked by heavy lifting. He never, however, met with any injury. Six years ago he began to notice gradually increasing loss of strength in the legs, which progressed so slowly that for eighteen months he was still able to run about, though not so actively as other boys. He was not obliged to use a cane until two years ago, and since then only in walking considerable distances. This gradually increasing debility was attended with no pain, formication, or subjective sense of change of temperature in the legs. There were also no contractions or cramps of the muscles. The progressive debility had not continued long before he noticed that it was necessary, when he was standing or walking, to throw his shoulders back and protrude his abdomen and lower part of the thorax, thus showing that the muscles of the back were affected at a very early date. During this early period he could walk quite naturally, but in running he threw his shoulders far back and stretched his legs widely apart; he assumed the same position also in going up an elevation. Two years later the muscles of the arms became affected in the same way as those of the legs and back. During the first three years he merely noticed that the legs did not grow as they should do, but afterwards atrophy began, first in the muscles of the calves, shortly after in those of the thighs and of the back, and soon afterwards in those of the shoulders and arms. About two years ago, after the atrophy of the muscles of the calves had become very marked, he noticed that they began to increase in size, and this growth has continued until they have acquired a size much greater than they ever had previously. This process of renewed growth next appeared, about one year ago, in the muscles of the forearm, and has continued at a slow rate. During all this time his weakness has steadily increased; he has, however, never been kept in bed by it, but has been able to get about feebly by the aid of a cane. He has never had a sense of constriction about any part of the body. His appetite throughout has been good, his digestion fair, and bowels regular. His urine has always been passed with ease, and has merely been noted to be occasionally yellow. About one year ago he was seized, without any apparent cause, with a severe epileptic convulsion, and since that time he has had similar attacks at intervals of from fifteen to thirty days. He has usually been unable to tell when these fits were coming on, but occasionally he has had a strange feeling in the head, and has thought of foolish things, before the attacks. The fits have been attended with entire unconsciousness, sudden falling to the ground, and muscular convulsion. He has usually been half a day in entirely recovering from them. He has never had more than two convulsions on the same day.

Present condition.—His expression is natural, mind active, and special senses unaffected. The muscles of the face are not involved, and their action is perfect. His tongue is clean and moist, appetite fair, digestion easy, and bowels regular. There is no enlargement of the abdominal viscera. The urine is normal and secreted in normal quantity. His respirations are easy, twelve in the minute, chiefly diaphragmatic: the vesicular murmur is soft and healthy. The cardiac sounds are normal. The pulse is 75, in the recumbent position.

Muscular system.—The muscles of the neck (sterno-cleido-mastoids and extensors of the head) are of fair size, and their movements are strong and free. The trapezii are feeble, and he retracts the shoulders with difficulty and feebly. The pectoral muscles are moderately wasted and feeble. The scapular group of muscles are less wasted, and the scapulæ do not project markedly from the thorax, so that the serrati magni are probably not much wasted and enfeebled. The deltoids are extremely wasted, and he is unable to raise either arm within thirty degrees of the horizontal plane; when the arm is raised, there is a marked depression below the acromion process. The biceps muscles are also extremely wasted, and he is able to flex the forearm only a little beyond a right angle. The triceps muscles are also very feeble, and the long head of each is greatly wasted, while the external and short heads appear as quite prominent fleshy masses.

The forearms seem unduly large in comparison with the atrophied arms, and are in reality larger than they have ever previously been. They have, moreover, a peculiar blunt and swollen appearance, owing to the sudden enlargement of the muscles above the wrists. The atrophy of the forearms seems never to have reached the degree attained elsewhere, so that the degree of consecutive hypertrophy has not been so marked as in the calves. The grasp of the hands is decidedly weaker than would be expected from the size of the forearms, that of the right being much weaker than that of the left hand. There has been no atrophy of the muscles of the hands.

When he sits up in bed, he is only able to hold the shoulders back with effort; there is increased bowing forward of the vertebral column, with absence of the lumbar depression. There is decided wasting of the erector spinæ muscles on either side. When lying in bed, the lumbar spine is raised, so that the obliquity of the pelvis and hypogastric region is increased. The muscles of the abdomen and thorax are not wasted, and preserve good strength.

When he is lying down, the feet are strongly extended and adducted (equino-varus), so that the toes point towards each other, while the soles rest on the bed. There is great prominence of the tarsus. The muscles of the thighs are all much wasted, as are those of the buttocks. It is with difficulty that, when lying down, he can draw up the legs by the action of the flexor muscles. He has much more power of extending them by the quadriceps extensors. The rotators, abductors, and adductors of the thighs are much less affected. He can move in bed only by a wriggling motion.

The calves appear as large as those of a vigorous man, contrasting very strangely with the wasted thighs. They feel quite firm, even when relaxed, and when he contracts the muscles they stand out well, and are hard and elastic. The heads of the gastrocnemii especially become prominent, standing out like firm subcutaneous tumors. He has considerable power of flexing, adducting, and abducting the feet, but the extensors are very feeble. The muscles of the right thigh and leg are decidedly stronger than the corresponding ones of the left side.

In rising from the recumbent position into a sitting one, he is obliged to make a very strong effort. When about to stand up, he throws his body forward till it almost rests on his thighs, and then, placing his hands on his knees and rising a little from his seat, he slowly raises his body by sliding his hands up his thighs; and when he has raised himself as far as possible in this way, he places one hand after the other on a chair-back or edge of a table, and leans forward. He then, by jerks of the alternate sides of the body, draws his legs forward, thus assuming more and more nearly an erect position. So soon as he approaches this, the legs are widely separated, the shoulders thrown quickly back, and the abdomen protruded, and, after tottering a few times, he secures his equilibrium in this peculiar position. It is very tiresome for him to stand without some support, and when he does so

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he bears with his whole weight on the right foot, the sole of which rests flat on the ground, while the left leg is thrown forward in advance, and the heel elevated from the ground. When a support is afforded him, he places both hands on it, and leans forward, rising on the balls of the feet, so that the heels are raised one-half inch from the ground. (See figure.) In this position he stands for half an hour or more at a time. The muscles of the calves are contracted and thrown into prominent relief.

In walking, as in standing, the shoulders are thrown very far back, and the lumbar depression is rendered very deep; the arms hang down by the sides, coming decidedly behind the line of the buttocks. The legs are kept quite widely apart. He advances each one by resting his weight on the opposite foot, and then swinging forward the whole side, the foot describing a slight arc. At the moment of thus swinging forward either leg, he rises slightly on the opposite foot. While standing on the right foot, the whole sole rests on the ground, though the heel merely touches it lightly; but when his weight is thrown entirely on the left leg, the left heel still does not touch the ground. The effort of advancing each leg is evidently great; the muscles of the thighs tremble and quiver, but those of the calves contract forcibly and are thrown into bold relief. Walking is very tiresome, and gives him pain and soreness in the back. No fibrillar contractions are seen in any of the muscles.

Electric examination, April 23, 1871.—The muscles of the forearm (tested on the right side) contract well under a faradaic current of rather unusual strength; they also respond well to faradization of the brachial plexus. Electro-muscular sensibility is not acute, though this may be a mere individual peculiarity. The muscles of the arm, the pectoralis major, and the trapezius all contract on faradization, whether direct or applied to their motor points. It requires rather too powerful a current to produce these effects. A still more powerful current is required to induce contraction of the thigh-muscles, but they all respond, though feebly: the sensibility to the current is impaired. The contractions of the flexors of the leg on the thigh are the most feeble, and are obtained only by very strong currents. The muscles of the leg respond more actively than the muscles of the thigh, whether the electrode is placed over the nerve in the thigh, or on the motor point of the muscle, or directly over its body.

When tested with a galvanic current, the muscles of the calves of the legs contract with each interruption and renewal of a current of rather unusual strength (twenty cells, Stöhrer), and electro-muscular sensibility is acute. The muscles of the thighs also respond, but with more difficulty, to the galvanic current.

The following measurements were taken:

Right arm,	greatest circumference		7 inches.
" forearm,	circumference one inch above wrist		6 "
" "	"	at middle	8¼ "
" "	"	three inches below elbow, point of greatest thickness	8½ "
" thigh,	circumference hand's breadth above knee		10¼ "
" "	"	at middle	11½ "
" "	"	close to perineum	12⅞ "
" calf,	"	at thickest part	12⅝ "
Left arm,	corresponding point		7 "
" forearm,	"	"	6 "
" "	"	"	8⅛ "
" "	"	"	8⅜ "
" thigh,	"	"	10½ "
" "	"	"	11⅜ "
" "	"	"	12¼ "
" calf,	"	"	12¼ "

The general *sensibility* is everywhere normal, and there are no subjective disturbances of sensation. The circulation of the extremities is somewhat feeble, and both hands and feet readily become bluish on exposure to cold. The color of the surface is, however, everywhere normal, without any mottling.

April 30.—He had to-day an epileptic attack, with frothing at the mouth, general muscular spasms, and unconsciousness, lasting for eight minutes. There was deep stupor and sleep for four hours subsequently, and he did not entirely recover until the following morning. The fit was preceded for about a minute by the foolish fancies he has frequently had before.

Ordered Syr. Phosphat. Comp., f℥ij, t. d.
Faradization of arms and legs on alternate days.

Remarks.—I have been led, gentlemen, to detail at unusual length the symptoms present in this case, not only on account of its great interest and rarity, but because it is the first case of this disease that has been carefully studied and described in this country.* In commenting upon these symptoms, I will ask your attention especially to those points which are most highly characteristic.

The mode of invasion of the disease presented a distinct peculiarity. It was marked merely by a progressive loss of power in the muscles of the legs, buttocks, and spinal region, which was so gradual in its development that the patient continued able to run about for eighteen months. In the present case the loss of power involved the muscles of the buttocks and spinal region sooner than usual, since there was a very early development of the next two symptoms characteristic of progressive muscular sclerosis,—peculiarity in the position and gait of the patient, and marked anterior curvature of the lumbar spine. Patients affected with this disease stand and walk with their legs widely separated, as though to enlarge their base of support and thus increase the security of their equilibrium. Duchenne is inclined to think that this position cannot be exclusively due to the weakness of the legs, since in other forms of partial paralysis of the legs the same position is not assumed to an equal degree. It appears to me that the separation of the legs may also be partly accounted for by the extreme obliquity of the pelvis caused by the lordosis of the lumbar vertebræ; and a further cause of this separation of the legs will be found in the mode of walking.

The weakness of the legs and of the gluteal muscles gives to the patient a peculiar gait, which I have attempted to describe. This peculiarity consists essentially in the fact that the patient, in taking a step forward, for instance, with the right foot, throws his entire weight on the left leg, leaning over to that side, and then, by a jerk of the right side of the body, the right leg is thrown or drawn forward, the foot describing a small arc, and the toe pointing downwards. It is evident that this mode of walking must be an additional cause of the separation of the legs, since, when the weight of the body is thrown on one leg and the other is swung around, the step can be made more readily and much longer when the feet are wide apart.

While the weight of the body rests on either foot, it will be noticed that the heel is raised slightly from the

* In the *Boston Medical and Surgical Journal*, November 17, 1870, there is an interesting paper on this subject by Drs. Ingalls and Webber. Unfortunately and unavoidably, the report of the case, which serves as the introduction to the paper, is very meagre. The article contains, however, a valuable tabulated summary of all the cases of this disease on record up to that date. There is also a complete bibliography appended.

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ground, or at most touches it very lightly. It is evident that in such a mode of walking as this the muscles of the leg upon which the whole weight of the body is thrown, and which serves as a fulcrum, must be subjected to a severe strain and be thrown into a state of powerful contraction.

It is curious to observe in our patient that, while the wasted thigh-muscles tremble and contract feebly, the muscles of the calves appear to contract very powerfully, and stand out in bold relief. I shall return to this point, but will now merely call attention to the further proof of the greater power of these calf-muscles, shown by the elevation of the heel from the ground at the very moment that the whole weight of the body is resting on the same leg. This elevation of the heel is not a voluntary act, intended to give greater height, so that the sweep of the other leg may be more readily effected, but is the unavoidable result of the marked superiority in power of the extensors of the foot over the flexors.

The next striking peculiarities about patients with this disease are the mode of rising from the sitting to the standing position, and the posture assumed while standing. Nothing could more strikingly demonstrate the great weakness of the extensors of the back than the manner in which our patient gradually raises himself into the erect posture by the power of his arms. The weakness of the same muscles compels him, when standing, to counteract the tendency to fall forward by throwing the shoulders far back, while the lumbar spine projects forward, thus deepening greatly the lumbar depression, and producing the deformity known as "ensellure," or "saddle-back." Duchenne calls attention to a peculiarity of the spinal lordosis in this disease, as distinctive from that seen in atrophy or paralysis of the muscles of the abdominal walls, in the fact that a vertical line dropped from the most prominent spinous process falls behind the plane of the sacrum. This peculiarity is very clearly shown in the accompanying wood-cut, which illustrates the position my patient assumes when standing and leaning on a support.

I have already alluded to the disproportionate strength of the muscles of the calves; and this is also clearly seen in the existence of double equino-varus. It is impossible to ascertain the precise period when this deformity began, but it is probable that, as is usually the case in this affection, we may class it as one of the later symptoms. At all times, but especially when the patient walks, the tendo-Achillis on each side appears unusually tense, prominent, and large; but there can be no doubt that the tendency to club-foot is due solely to the superior strength of the muscles of the calf (the extensors of the foot) as compared with that of the flexors. Thus, on directing the patient to make various movements with his feet, it is readily perceived that the movements of flexion of the foot are very feeble, while those of extension and adduction are quite vigorous.

Finally, it remains, in studying the symptomatology of this case, to examine carefully the relation which the atrophy and hypertrophy of the muscles bear to each other. I desire to call more particular attention to this point, since, in the cases of this disease hitherto recorded, muscular atrophy has either not been present, or has not attracted the careful study it merits, at least from a theoretical point of view. The changes in the muscles have invariably been preceded, as in the present case, by a stage of progressive debility of varying duration, after which the first alteration observed in the muscles has been, in a majority of cases, a gradual increase in their bulk. In a few cases, atrophy of certain groups of muscles has coincided with enlargement of others. In the present case, however, the processes have been differently related. In all of the muscles affected, including those of the extremities, of the buttocks, lumbo-spinal region, and shoulders, the first change noticed has been a slowly developing atrophy, which has advanced in the case of certain muscles (*e.g.* the biceps flexors of the arms and the calf-muscles) to an extreme degree. Thus, wherever enlargement of the muscles is noted, it has been developed as a secondary change consequent upon a primary process of atrophy, a fact which appears to me highly important as bearing on the affinities of the disease we are considering.

The modes of distribution of these two conditions are, however, quite dissimilar. Thus, in the case of the atrophic change, it has advanced from the feet upwards, successively involving the muscles of the calves, thighs, buttocks, lumbo-spinal region, shoulders, arms, and forearms. On the other hand, the process of consecutive enlargement, having also appeared first in the muscles of the calves, has affected in addition only the muscles of the forearms and two of the heads of the triceps muscles. This irregularity in the distribution of the excessive muscular growth has been noted in other cases, in some of which it has remained limited to the legs, or has involved in addition the arms and even the face. The usual rule is, however, for it to affect the legs first, and thence to extend to the truncal muscles.

The statement is made by several observers that the weakness of the muscles increases with the increase in their bulk; and in certain cases this would appear to have been the case. More usually, however, no direct relation exists between the loss of power and the apparent enlargement of the muscles; and it may even happen, as in the present case, that those very muscles are by far the strongest which have undergone most marked secondary enlargement. This is clearly seen in the production of double equino-varus by the over-action of the extensors of the feet, and is no less true of the muscles of the forearms. It is important to note carefully this fact, since it shows conclusively that, whatever may be the nature of the change in the muscle which leads to its enlargement, its first and direct effect is not to weaken the contractile power.

The affected muscles in this disease give different results when tested with faradaic and with galvanic currents; the results also vary at different stages of the same case. In the present instance, the results accord with those obtained in a number of cases, especially in those studied by German observers; that is to say, the muscular contractility, as tested by faradization, is impaired in all the affected muscles, those which are hypertrophied, however, contracting more actively than those which are atrophied. The galvano-contractility is also slightly impaired. The electro-muscular contractility has been found unimpaired in the earlier stages of the disease; but later it diminishes, the muscles continuing, however, to respond actively to galvanism after they have partly lost their power of responding to faradization.

Electro-muscular sensibility has been found normal or impaired in different cases: in my patient it is diminished to faradization, but remains acute to galvanism. The temperature of the affected parts remains normal in some cases, while in others it is lower than that of the trunk, and the skin has then been observed, in a few cases, to be marbled or mottled.

There is an entire want of disturbance of the general health in this singular disease. The appetite remains good until a late period, digestion is well performed, and the action of the bowels is regular. Neither the rectum nor the urinary bladder becomes paralyzed. The disease is not attended by any pain or alteration of general sensibility.

It is a singular fact that in a notable proportion of the cases progressive muscular sclerosis has occurred in children of feeble intelligence or in idiots. There is, however, no necessary connection between it and any

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kind of cerebral disturbance, since in some cases the disease has existed in a well-developed form in conjunction with a normal condition of the mental functions. The complication of epileptiform convulsions, which is presented in the case before us, is a hitherto unobserved one. It is, however, associated with such perfect retention of memory, such activity and clearness of mind, and such integrity of all the special senses, that I cannot regard it as any evidence of an organic affection of the brain. I shall, however, return to this point hereafter.

I have thus dwelt upon the various symptoms of this disease, which we have seen to be characterized by a period of gradually increasing debility, soon followed by peculiarities in the mode of standing and walking, by lordosis of the lumbar spine, and by equino-varus; while later still the enfeebled muscles either undergo atrophy, with a subsequent remarkable enlargement of a greater or smaller number of them, or they pass into this state of enlargement without undergoing any previous diminution in size. The subsequent course of such cases, so far as known, may be told in a few words. In all instances where the disease has reached the stage in which the symptoms are fully developed, a fatal result has followed. The disease is a slow one, and may occupy several years in reaching the period of its full development; it then remains stationary for several years longer; but finally a stage ensues in which the loss of power rapidly increases and extends, with or without accompanying atrophy, to muscles previously unaffected. The sufferer is soon confined to bed, and death occurs in one or two years, either from sheer prostration or from some intercurrent disease.

When we come now to ask ourselves what relation this disease bears to the various forms of paralysis or of muscular atrophy, we are met by the difficulty that, until the present time, but one careful post-mortem examination has been made of the body of a patient dying from this malady. In this instance the nervous centres were examined by Cohnheim, but with entirely negative results. But although, therefore, there is still great need of further examinations of the internal organs, nerve-centres, and ganglia of the sympathetic nerve, much light can be thrown upon the question by the careful examination of the tissue of the affected muscles. This is secured by the use of a little instrument, devised by Duchenne, and termed an "emporte-pièce,"* by which fragments can be obtained from the substance of any superficial muscle and subjected to microscopic examination.

I have thus obtained a fragment from each of the gastrocnemii and from the left deltoid muscles, and have found the following appearances, after careful microscopical examination of each piece.

(To be concluded.)

THE PAIN OF LOCOMOTOR ATAXIA AND ITS RELIEF.—Dr. Althaus, in a communication to the *British Medical Journal* for May 13, 1871, expresses his belief that the paroxysmal pains in locomotor ataxia are owing to tetanic spasms of the muscular coats of the arteries, caused by irritation of the vaso-motor system of nerves. We must, therefore, he says, look for remedies chiefly among those agents which we know to possess a powerful influence on the sympathetic. Among these the continuous galvanic current stands *facile princeps*. The current is to be applied, not *loco dolenti*, but at the neck, to the course of the cervical nerve. A case is given in which much relief was experienced from the application of galvanism.

*This useful little instrument is shaped like a trochar. The blade is, however, a hollow cylinder, composed of two parts, one of which, bearing the point, is fixed, while the other can be withdrawn a little by sliding a movable button on the handle. The trochar is introduced closed into the substance of the muscle, the button withdrawn, so as to open the cylinder and allow a fragment of muscle to project into it; the button is then pushed forward, cutting off and securing the little morsel of tissue.

CLINICAL LECTURE
ON MONSTROSITIES.

ILLUSTRATED BY A REMARKABLE LIVING DOUBLE MONSTER.

BY WILLIAM GOODELL, M.D.,

Clinical Lecturer on the Diseases of Women and Children in the University of Pennsylvania.

GENTLEMEN:—I have brought before you this remarkable living specimen of a double monster, not to gratify an idle curiosity, but in order to enlarge the scope of our knowledge. Should the subject of monsters seem to you unworthy of scientific investigation, consider its practical bearing upon obstetrics, and its interesting relations to the study of embryology. Exceptions prove the rule, and the anomalies of Nature do good service by throwing much light upon her normal operations. The study of the one group illustrates the other, and by this interchange of support I hope to show to you that single and double monsters do not result from a violation of those laws which govern our development, but simply from an embarrassment to their free operation. Let me first, however, call your attention to these unfortunate creatures,—or *creature*, shall we call it?—lying so contentedly upon this table, and happily unconscious of the interest they are exciting.

On the 12th of last October, Mina and Minnie Finley were born in Peru township, Morrow county, Ohio. Early in this (her fourth) pregnancy the mother met with a severe fall, and narrowly escaped a miscarriage. The labor was unusually easy, the mother being quite alone at the moment of delivery. From the position of the children in the bed, Dr. Besse, who arrived soon after, concluded that Mina—the larger child—was born first. There was but one placenta and but one cord. Shortly after birth the umbilicus took on extensive sloughing, which seriously compromised their lives. From the consequent loss of structure, the fovea has become effaced, and nothing but a large cicatrix—equidistant from each vertex—indicates its former site. This monstrosity consists of two individuals, fused together, on a common longitudinal or vertebral axis, by one pelvis common to both. Each pole of the common vertebral column terminates in a head, whilst each individual is normally developed as far as the pelvis. On one side of this appear two perfectly-formed legs, one of which belongs exclusively to Mina, the other to Minnie,—a fact proved by tickling each foot alternately. Between these limbs are situated one anus and one set of the external genital organs of a female. On the opposite side of the pelvis projects a rudimentary limb, made up of lateral halves, contributed equally by each individual. It contains a broad femur deeply furrowed in the median line, two tibiæ, and two fibulæ, and ends in a foot furnished with two calcanea, two big toes, and six little ones. This fused or siren limb is so twisted on its axis that its heels look upward,—while the children are lying on their backs,—conveying the impression that the half of this limb nearer to the one child belongs to the other child. The vascular and nervous systems of each individual are independent and distinct. Thus, the pulse in one beats faster than that of the other; one—as you observe—is now asleep and motionless, while the other is awake and playfully tossing about its arms and leg. One of these children is weak and puny, the other healthy and active. A few weeks ago, a change of milk at Columbus, Ohio, disagreed with Minnie, who became quite sick with a diarrhœa, while Mina, being more robust, remained as well as usual. It was now noticed that green and liquid stools alternated with those of a feculent character. Ordinarily, the act of defecation in the one child seems to excite peristaltic movements in the bowels of the other, as shown by two copious evacuations in quick succession. These facts lead me to think that each individual is provided with its own alimentary canal, which unites with its fellow to form one common rectum. They also have probably but one bladder between them. Thus,

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separated by brain and intelligence, and distinct individuals as regards the more vital organs, they yet share in common the more degraded apparatuses of animal life.

On referring to different works on teratology, I find that this form of monstrosity is by no means unique. Dr. G. J. Fisher (*Trans. Med. Society of the State of New York*, 1866, p. 252) details four such cases, each one exactly similar to the specimen before you, with the single exception of the twist on its axis of the fused limb. A fifth is reported and illustrated by Ambrose Paré (*Les Œuvres, etc.*, Lyon, 1652, p. 652). The wood-cut of a sixth is given by Ulysses Aldrovandus (*Monstrorum Historia*, Bononiæ, 1642, p. 646). For a knowledge of the seventh I am indebted to the courtesy of Dr. Louis S. Stillé. It was born in Mers, France, in August, 1845, was examined in September by a commission appointed by the Académie des Sciences, and one month later was still alive (*L'Illustration*, November, 1845, p. 165). Just before entering this room, Prof. Joseph Leidy informed me that an eighth was born in Ireland: it lived a week, and was, after death, sold to the College of Surgeons in Dublin (*Todd's Cyclopædia of Anatomy and Physiology*, vol. ii. p. 317, fig. 146). The same gentleman also tells me that Rokitansky (*Lehrbuch d. Pathol. Anatomie*, 3d ed., p. 321, fig. 7) gives the figure of a similar case, but does not state where it occurred.

Although this is not, then, a unique case, so far as form is concerned, it is so when we consider the length of time the children have lived, since in all the other cases, with but a single exception, death took place before the fifth day. The interesting question may now spring up in your minds whether upon the death of Minnie—the puny one—her sister could live on indefinitely,—whether there could be repeated the grim story of the two galley-slaves chained closely together, one of whom, when jaded out by grief and hardship, sickened and died, leaving his comrade to drag about the putrid body by day and to shudder over it at night, until, stricken down by horror and poisoned by the stench, he too at last ceased to live. Fortunately, such a fate is not in store for either of these children: the history of other double monsters, such as Rita and Christina, and the Hungarian sisters, shows that the death of one is invariably followed by the immediate death of its companion.

From the remotest antiquity, monstrosities have attracted the attention equally of the wise and of the ignorant. Hippocrates and Galen, Pliny and Aristotle, and many other classic physicians and historians, have written about them. Since the year 1549 there have been issued from the press over three hundred works and pamphlets upon this subject, whilst of double monsters alone there are recorded over five hundred cases. The word *monster* is derived from the Latin verb *monstrare*, "to point out" or "presage;" for, in former days, any such deviation from the ordinary human type was deemed an omen of evil import,—a harbinger of some approaching calamity. Hence, until within a century and a half, the history of monsters has been a collection of marvellous tales, exaggerated by superstition and fear.

Influenced by such a belief, it was the custom of the Greeks and Romans to destroy all malformed children. So late as the seventeenth century, Riolanus wrote a work entitled, "Whether, after the example of the Romans, monsters ought to be destroyed."* In it he directs that "giants and dwarfs, and children with six fingers, *may* be suffered to live, but only in perpetual seclusion." Even at the present day a popular feeling prevails that it is the duty of the physician to destroy the lives of all such unnatural offspring. But, gentlemen, God, who alone gives life, has not delegated to us the right of taking it. Had such a cruel practice been enforced, Ireland would now lack in the House of Parliament her eloquent champion,—the armless and footless Arthur Kavanagh. The Siamese twins, suffered to live, have become prosperous farmers and good citizens; and who are we, to say that these children cannot become useful members of the human family?

There is yet another prejudice to combat. Even in this enlightened age the vulgar delight in tales of human and animal monsters resulting from intercourse either between man and beast, or between animals of widely different genera. Ancient mythology teems with such allusions, and pagan sculptors have perpetuated this infamous belief. But science steps in to tell us that these monsters are not the hybrids of an unnatural congress, but mere vices of conformation, due either to irregular *excess* or *arrest* of embryonic development. Variations in their external conditions may produce in organisms corresponding variations, capable of being propagated. The stability of species may possibly be affected by such progressive modifications; but this does not invalidate the Mosaic account of the Creation. God created every creature and every living thing "*after his kind*," and this primitive law of specific generation remains unshaken by the rude assaults of vain philosophy, which tickle the imagination, but contradict the reason.

Early in the last century, Haller rescued the subject of monsters from the idle speculations of the ignorant, and raised it to the dignity of a science. Bichat still further elaborated it; but to no one are we more indebted than to Isidore Geoffroy St.-Hilaire, who, in 1832, first published his splendid work upon "Teratology," as he termed it,—a compound word, derived from τερας, "a monster," and λογος, "a discourse." This name, so appropriate for the science of monstrosities, has now been generally adopted. By careful dissections and numerous comparisons, St.-Hilaire found that all the so-called monsters followed certain laws of development, in harmony with those of embryology, and were in fact capable even of classification. The science of "double monsters," or *diploteratology*, which more especially concerns us, has been carefully elaborated by one of our own countrymen,—Dr. G. J. Fisher, of Sing Sing, N.Y.,—who contributed several exhaustive papers on this subject to the Transactions of the Medical Society of the State of New York for the years 1865, 1866, 1867, and 1868. From this source I have borrowed most of the materials for this lecture.

According to Dr. Fisher,—and I here quote much of his language,—the genesis of double monsters is not an accident or a mere freak of nature, but the result of an obedience to three invariable laws.

1. *The law of Unity of Sex.*—Out of over five hundred cases of human double monsters, as well as of innumerable cases in the lower order of animals, in no single instance has this law been violated. The account of a double monster of both sexes, given by a clergyman of Giessen, is very properly rejected by Virchow and other teratologists. The individuals of a double fœtus must be either both males or both females, whilst in the vast majority of cases they have been *females* in preference to males.

2. *The law of Homologous Union.*—That is, the union is symmetrical in all degrees of duplicity, as is the union of the two lateral halves of a single fœtus in normal gestation. In other words, there is an equal balancing of parts and organs in each individual. The same muscle of the one fœtus unites with the same muscle of the other; the same bone to the same bone; the same nerve or blood-vessel to the same nerve or blood-vessel; and so on, until even the same parts and

*"An Romanorum præceptis monstra interfici debeunt," Paris, 1605.

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the same organs are united to their fellows, heart to heart, stomach to stomach, back to back, side to side, and *pelvis* to *pelvis*, as in the children before us. In those cases of apparent exception to this law—such as a fœtus by inclusion, a parasitic monster, or, for instance, when an infant vomits up the fragments of an embryo (*Revue Médicale*, vol. lxi. p. 412)—it has been found that the union was homologous in the early embryonic periods, but that the growth of one of the individuals being arrested or retarded, this blighted one was overlapped and included by its fellow.

3. *The law of Right and Left Symmetry.*—This means that there will be a transposition of the viscera of each individual in order to dispose them symmetrically in relation to the common median axis of the compound body. If the double fœtus has two hearts, they will be right and left in position, and their apices will converge towards the line of fusion of the two bodies. This will be found true also of the spleens and livers, and of the cardiac extremities of the two stomachs, which will look the one towards the other.

With these three laws to guide us, we are now prepared to weigh the merits of the different theories broached to account for the production of double monsters.

1. They have been attributed to *maternal impressions*. You have all read how the patriarch Jacob "took him rods, . . . pilled white streaks in them," and put them in the watering-troughs, so that, "when the flocks conceived before the rods," they might bring forth "cattle ring-streaked, speckled, and spotted." Ever since that time, a popular belief in the influence of maternal impressions upon the embryo has held its own against the ridicule cast upon it by men of science. Latterly, a growing tendency to adopt this view has sprung up, and such men as Dalton, Hammond, North, and Seguin have joined the ranks of the people. Some weeks ago, you will remember, I stated that the resemblance of certain malformations of the child to certain powerful impressions of the mother is more than a mere coincidence, and that we are forced to accept this popular belief,—with much reserve, however. Yet no educated man can for a moment entertain such a theory to account for the production of double monsters. For how can a maternal impression create a double monster always of one sex, and always obeying the laws of homologous union and of right and left symmetry?

2. The theory was next advanced that they resulted from the fecundation of a double egg,—*i.e.* of two distinct yolks enclosed in one capsule; but when subjected to the test of experiment it utterly failed. Prof. Panum, of Kiel, procured eighty double-yolked eggs of domestic fowls and put them in his hatching-apparatus. Very few of these came to maturity, because the pressure of the increased bulk tended to destroy each embryo. From those which he succeeded in hatching, two distinct and separate chicks were produced, which, like other twins, were either of the same sex or of opposite sexes.

3. Another still more plausible theory was next suggested, that double monsters were originally twin conceptions, but that, the membranes separating them being absent, imperfect, or absorbed, the two bodies were brought into close contact with each other, and coalesced by reason either of some inflammatory action, or of the strong formative power existing at that period of uterine life. On a close examination, this theory will not stand; for—(*a.*) Twins may be of different sexes. (*b.*) One-third of twins are contained in but *one* amniotic sac (*Lond. Obstet. Trans.*, vol. xi. p. 69), the very condition proposed as most favorable to coalescence, and yet usually in these cases the twins are of opposite sexes. (*c.*) This theory will not explain the laws of homologous union and of right and left symmetry, for merely fused twins must coalesce at any irregular point of contact, such as an arm to a foot, a back to a breast, a head to a pelvis, which, however, is never the case.

4. Compelled to advance a theory in harmony with these three laws, leading teratologists now hold that every double monster is the product of but a single ovum, whose vitelline membrane contains two primitive traces—*i.e.* two neural axes—instead of one. But the question still remains open, whether these two primitive traces are evolved as such from the ovum during the process of its segmentation, or whether they result from the splitting of an original one into two by vertical division,—a property which is known to belong to some polyps and infusoria.

You have been taught that the first evidence of successful fecundation is the division and subdivision of the yolk into segments,—*i.e.* the *segmentation of the vitellus*,—by which true animal cells are produced. These, by aggregating and cohering at their edges, form the *blastodermic membrane*. As advancing organization takes place, we find this membrane thickened into an oval spot,—the *embryonic spot*. Enclosed within it is a transparent space,—the *area pellucida*,—within which runs longitudinally a delicate line or furrow,—the *primitive trace*. This is the cerebro-spinal axis of the germ man, from one pole of which are evolved the brain and head, from the other the sacral plexus of nerves and the lower extremities.

It is reasonable to affirm of each entire ovum a sexuality which decides the sex of its primitive trace. Hence, should the ovum contain two primitive traces, or, *a fortiori*, should one trace be split into two, they must be of the same sex. Also, as the process of development of these two traces will be limited to but one ovum, it will be under the control of strictly identical germinal laws, and thus homologous and symmetrical development and fusion will result. For it is easy to see that, as these two traces evolve, fusions, malformations, and absence of parts must take place from embarrassments to their growth at the line of contact. Further, the degree of duplicity and the extent of fusion will depend upon the proximity or remoteness of these two primitive traces and the relative inclination of their axes. This so-called *segmentation* theory, as Virchow observes (*Richmond and Louisville Journal*, January, 1871, p. 23), "is acceptable not only for its simplicity, but because it also accounts for every kind of duplicity, —as a sixth finger, etc." It also explains the harmony of temper and identity of tastes which double monsters exhibit, for by this theory they originate from a single germ, and their mental apparatus is "developed from an originally identical deposit."

In conclusion, the question has probably arisen in your minds why single and double monsters are females in the vast majority of cases. In these days of advance, I approach the solution of this problem with much diffidence. In the inferior animals monsters relatively occur far more frequently than in the human family, and even then are usually of the female sex. Teratologists, therefore, contend that this affords only an additional proof that woman is an organism of a lower type than that of man. This explanation you will accept or reject, as you please.

ULCERS A CAUSE OF BRIGHT'S DISEASE.—Prof. Fischer, of Breslau (*Boston Medical and Surgical Journal*, May 25, 1871, from the *Journal of Cutaneous Medicine*), has shown that chronic ulcers of the legs, if allowed to persist unhealed, invariably lead to *albuminoid degeneration* of the kidney. Hence the cure of such ulcers becomes a matter of great importance. Dr. F. recommends Langenbeck's continuous bath as the best treatment.

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ORIGINAL COMMUNICATIONS.

ANTERIOR LUXATION OF SEMILUNAR BONE—EXCISION—RECOVERY.

BY J. J. CHISOLM, M.D.,

Professor of Operative Surgery in the University of Maryland.

ALEXANDER STEVENSON, aged 25, tall and stout, a sailor, while engaged in taking in sail, on the 26th of March, 1871, fell from the main yard to the deck, a distance of about twenty-five feet. He fell upon his right side, with his right hand partially extended to break the fall. Besides sundry bruises, he sustained so severe an injury of the right arm as to induce him to think that he had fractured the bones above the wrist, and for the treatment of this he came under my care at the Baltimore Infirmary, ten days after the accident. When examined, there was not much swelling of the arm or hand, so that it could be seen that the axis of the hand was perfectly in line with the axes of the radius and ulna. Pressure with the finger upon the outer surfaces of the radius and ulna, from the elbow to the styloid process of each bone, did not cause the sharp pain which is so constant a symptom when a broken bone is pressed upon at its point of fracture. A large, rounded, hard, subcutaneous prominence existed on the front of the wrist, beneath the upper wrist-fold and directly over the site of the semilunar bone. This irregularly outlined, incompressible tumor stretched the skin, and was so firmly fixed as to exhibit not the slightest motion when manipulated with force. From the median position of this hard mass, which had been detected immediately after the fall, and which had not previously existed, dislocation of the semilunar bone was diagnosed. This opinion was confirmed by thrusting a needle, to the depth of an inch, into the back of the wrist, thus showing, by the free movement of the point in every direction, that a cavity existed where normally the compact semilunar bone is found. The pressure made by the luxated bone kept the fingers in forced and painful flexion. The immobility of the bone rendered futile all attempts at reduction.

Three weeks after the occurrence of the injury, finding that the presence of the bone would permanently destroy the movements of the wrist, and that the slightest motion in the fingers continued to give great pain, I placed the patient under the influence of chloroform, and removed the displaced semilunar bone through an incision in the median line 2½ inches long. The operation I found much more tedious than I had anticipated, notwithstanding that the bone was completely dislodged from its socket. The force which produced the luxation had not lacerated all the ligaments, so that when the bone had been loosened from its cavity a rotary motion had been imparted to it of so extensive a character as to give it a half revolution on its lateral diameter. This turned the crescent-points and the concave surface for the reception of the rounded head of the os magnum towards the lower end of the radius, while the convex surface belonging to the radio-carpal joint was turned towards the fingers, and was lying over the head of the os magnum. Some of the untorn ligaments were so stretched over, and others under, the luxated bone as to tie it down firmly in its new position, rendering it very difficult to enter the point of a knife between the semilunar bone and its closely-hugged neighbors for its isolation and removal. Although these tensely-drawn ligaments kept the semilunar bone immediately over its proper area, its rotated position brought together such reversed and therefore irregular surfaces of bone and cavity as to render reduction quite impossible.

One would suppose, *a priori*, from the number of bones which compose the wrist, that some of these elements would be readily displaced, notwithstanding the many ligaments which run over as well as between the bones, binding them firmly together, and the very numerous tendons which surround the carpal joint, —especially since the hand is so constantly exposed to injury, force being transmitted to the carpal joint in most of the falls upon the upper extremity. The application of force to the hand, however, appears to be so distributed among the many carpal bones in the transmission of concussions, as to make these bones capable of withstanding much greater violence than can be with safety applied to the radius. Hence the very common accident of a fractured radius from falls upon the hand, and the rarity of fracture or luxation of the carpal bones themselves. Of the eight bones of the carpus, some are much more likely to receive the concentrated force of blows than others. In examining the arrangement of the two rows of bones and their metacarpo-phalangeal connections, it will be found that blows upon the hand and fingers pass upwards in such a way that concussions upon the first and second fingers would be transmitted to the scaphoid bone, and that concussions upon the third, fourth, and fifth fingers would be conducted through the length of the os magnum and sharp upper angle of the unciform bone, to the semilunar bone, and thence directly to the radius. It is only under peculiar circumstances that these upper bones of the carpus, squeezed between the ascending force transmitted through the hand bent in a certain position, and the descending weight of the body, could be dislodged from their sockets. These peculiar conditions, in falls which are so very common, can seldom exist, for among the rarest luxations of the skeleton are displacements of the carpal bones.

The extreme rarity of this lesion is readily perceived upon consulting our familiar and standard authorities. Most modern writers on luxations, even when they have apparently prepared exhaustive treatises, state that only certain partial simple dislocations of the wrist-bones are admissible, all not being equally liable to displacement. All agree that the os magnum and cuneiform bone are exposed to subluxations from their peculiar form, especially if there be relaxation of the wrist-ligaments, and that this partial displacement always occurs, as would be inferred, upon the dorsal surface. In the records of surgery we find a few such cases reported by Sir A. Cooper, Chopart, Boyer, and Richerand, and these have been copied by all surgical writers, forming their chief material for short paragraphs on wrist-luxations. We find such in the writings of the American surgeons Gross and Hamilton, and of the English surgeons Sir A. Cooper, Liston, Fergusson, Druitt, S. Cooper, Holmes, and Erichsen, also in the valuable and exhaustive treatises of Malgaigne, Nélaton, Vidal, and Boyer. All acknowledge that compound luxations, with fracture and extensive laceration of the soft parts, often befall the wrist-bones, either from the bursting of guns held in the hand (a frequent cause), from the hand being accidentally caught in machinery, or from other mechanical violence; but that simple and complete luxations from falls upon the hand are scarcely to be expected. When the os magnum and cuneiform bone are dislocated backwards, the displacement is never complete, and reduction is easy.

On consulting the authorities above mentioned, the only case of the very rare accident of anterior luxation of any of the wrist-bones which I can find reported, is one of anterior displacement of the pisiform bone from muscular effort, occurring in the practice of Sir William Fergusson. Of simple anterior luxation of the semilunar bone, similar to that now reported, I can find no case in the surgical authorities consulted. In Holmes' System of Surgery, it is mentioned that St. George's Hospital Museum, London, possesses the very curious specimen of compound luxation of both semilunar bones, occasioned by a fall from a great height upon the hands. The bones were driven from their cavities through the skin on the anterior surfaces of the wrists, and one bone was dangling from the hand, still held in contact by a few shreds of ligament. Malgaigne reports a second case as occurring in the practice of M. Mougeot de Bruyères, where the expulsion of one semi-

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lunar bone from the carpus was the only lesion. The patient, a carpenter, had fallen from a height of thirty feet on his hand, and the semilunar bone, which had been driven through a small wound in front of the carpal joint, was hanging without by some ligamentous fibres. Erichsen reports a simple luxation of the semilunar bone backwards upon the dorsal surface of the wrist. As far as I have been able to consult authorities, these are the only cases of luxation of the semilunar bones reported.

NOTES OF HOSPITAL PRACTICE.

ST. MARY'S HOSPITAL.

SERVICE OF DR. W. W. KEEN.

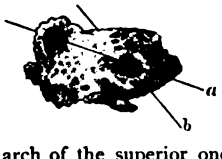
NECROSIS AND REMOVAL OF THE ENTIRE PETROUS PORTION OF THE TEMPORAL BONE.

ANNIE L., born in 1863, was admitted to St. Mary's Hospital, July 13, 1868. No exact history could be obtained. She had been sick five weeks, in a state of insensibility, commencing, it was said, in delirium. She had also had a "running from the ear." She had been called "scrofulous" in childhood. On admission she was entirely insensible, much emaciated, pulse 150 and weak, pupils permanently and widely dilated and insensible to light, sensation and motion entirely absent. Urine and fæces were passed involuntarily. No desire for food or drink, but when put in the mouth they seemed to excite reflex action and were swallowed, and the only limit to this reflex ingestion of food was the supply furnished. She was treated with beef-tea, milk, and Huxham's tincture, for which syr. fer. iodid. and ol. morrhuæ were soon substituted.

No change whatever was noticed for some weeks, but she then began gradually to improve.

September 20.—Has gained much flesh, and displays a certain amount of intelligence. Before the attack she could talk as is usual in children of her age; now she can only laugh, cry, and speak a few words indistinctly, and these have been taught her after a great deal of trouble. The seventh nerve is paralyzed, the pupils are still dilated, the evacuations are involuntary, the appetite is still unbounded, and taste is entirely lost; she takes all things with equal relish. For the last two weeks her left ear, and also a small abscess over the mastoid process, have discharged bloody pus.

September 23.—Finding dead bone in the meatus of the ear, Dr. Grove, by a small incision, removed the piece, which proved to be the entire petrous portion of the temporal bone, much eroded, but still showing the auditory meatus (*b*) and the walls of the three semicircular canals (the line *a* passes under the arch of the superior one). Of the carotid canal no distinct trace could be found, but a groove on the inferior surface seemed to indicate where it had been. The drawing represents the piece of the natural size.



October 1.—Dr. Keen came on duty, and saw the child for the first time. Her general condition is good. She is fat and hearty. She has been "adopted," one may say, by an old woman in the hospital, who is as watchful and careful of her as if she were her own child. She teaches her everything she can, but the child can only mumble a few words, and shows very little intelligence. Pupils permanently dilated and immobile. Entire loss of sight on both sides and of hearing on the left side; slight hearing still exists on the right. Taste and smell wholly lost, so far as can be ascertained with her want of intelligence. On the left side of her face she has lost almost all sensation, and when pricked till the blood flows, she scarcely responds at all; nor is the conjunctiva sensible to mechanical irritation. Motion in all the muscles of expression on the left side is wholly gone, and with the muscles of mastication she can only move the jaw, but not masticate her food. She can stand with considerable assistance, and thus supported can walk a few steps. Her teeth are serrated, and indicate inherited syphilis. No treatment was needed.

March, 1871.—She remains in the hospital as a home. Her mother is dead, but her father, having been lately questioned, denies any syphilitic taint. Her bodily health could not be better, and she is unusually solid and fat. The special senses are as follows:

Sight wholly lost. Dr. William Thomson kindly examined her retinæ carefully, and found complete atrophy of both optic nerves. Pupils still dilated and insensible.

Hearing wholly lost, the right ear also having become deaf.

Taste and smell wholly lost.

Touch entirely restored on the body and greatly improved on the face, where it now exists to say four-fifths of the normal degree.

Her muscles of expression are still paralyzed on the left side, but the muscles of mastication have almost wholly recovered their power.

Her general intelligence has greatly deteriorated. She now utters only the incoherent and unintelligible sounds of an idiot, but she is decided in her likes and dislikes, and indicates them both by sounds and by movements, all of which are now rapid and strong.

Remarks.—It is interesting to trace the clinical history of this case, though I regret that, from circumstances beyond my control, it is rather meagre. From some cause or other,—very possibly syphilitic,—inflammation began in the ear, and was followed by necrosis of the petrous bone. This was followed by universal meningitis, which produced not only temporary insensibility and paralysis, but a permanently impaired intelligence. By its extension also down the sheath of the optic nerves, sight was wholly destroyed. Taste and smell were probably similarly destroyed. Hearing was destroyed on the left side by the primary disease. Whether it was finally destroyed on the right by the same process is doubtful, for the seventh of that side should then have also suffered. My friend Dr. Pepper has suggested that possibly, by the law of Waller, the destruction of the left auditory may have been followed by centripetal degeneration, which crossed from the ganglion of the left nerve to that of the right. The facial being a centrifugal nerve, the degeneration would proceed towards the periphery and not towards the centre, and thus it would escape on the right side.

None of these special senses afterwards improved. Her intelligence, after improvement for a few weeks, retrograded, and is hopelessly destroyed; and during this decline in the powers of the peripheral cerebral cells, it is noteworthy that the condition of nearly all the central ganglia, both sensory and motor, improved, so that now she has complete motion and sensation.

The seventh nerve on the left side was of course wholly destroyed, and the facial paralysis has never improved in the slightest. The lesion of the fifth nerve involved the Gasserian ganglion and the motor root under it to such an extent that both sensibility in the face and motion in the muscles of mastication were reduced to a minimum. Notwithstanding that this ganglion was at the focus of the necrosis which produced the universal meningitis, and notwithstanding the injury probably inflicted by the spontaneous separation and the removal of the petrous bone under it, the ganglion and its nerve have nearly completely recovered.

As to the condition of the carotid we must remain in doubt. The retinal vessels were very small, but were similar on both sides. If, therefore, the left internal carotid was obliterated, the anastomosing circulation has been established by the circle of Willis and other vessels,—a result that would probably be facilitated by the inflammation which existed at the time.

For the main body of the notes I must thank Dr. Hargadine, the then Resident.

TOBACCO VERSUS MALARIA.—Dr. S. P. Crawford, of the San Joaquin Valley, California, states (*Nashville Journal of Medicine and Surgery*) that all the diseases of his neighborhood are affected by the intense malarial infection, and that he has noticed the free habitual use of tobacco is a very great protection against the miasmatic poisoning.

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JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROFESSOR GROSS, MAY 15, 1871

Reported by Dr. Ralph M. Townsend.

CONCEALED VASCULAR TUMOR OF THE FACE.

C. B., colored, aged 54 years, has had a tumor on his face for upwards of a year, supposed to be sebaceous, having the feel and external characteristics of a growth of this kind. On cutting into it, however, it proved to be a vascular tumor, and some little time was occupied in controlling the resulting hemorrhage. Needles, armed with strong ligatures, were passed crucially under the mesh of arteries and veins, and the growth was then, subcutaneously as it were, thoroughly ligated.

Such affections as these are generally congenital. These tumors exhibit considerable variety of structure, being sometimes essentially composed of veins, sometimes of arteries, and sometimes nearly equally of arteries and veins. When the tumor is arterial, it generally pulsates synchronously with the left ventricle of the heart.

SYPHILITIC AFFECTIONS.

Mrs. A. H., aged 55 years, has had a circumscribed swelling of the frontal and parietal bones for two years, the result of no injury, attention being first called to it accidentally. She has much pain in the part, which is increased at night and in damp weather. She has not lost her hair, nor had any eruption upon the skin; but she frequently suffers from sore throat, and her headache is so intense at times as to prevent sleep. She was ordered four grains of iodide of potassium and one-tenth of a grain of corrosive chloride of mercury in solution, three times daily, an hour after meals.

Mrs. M., aged 37 years, has an angry and excavated ulcer on the bridge of her nose, the size of a gold dollar. The ulcer is diphtheritic, and the seat of a stinging sensation rather than of a pain. The present sore was not noticed till last week; but months previously portions of the bones of the nose were discharged. She frequently suffers from sore throat, and has a hole in her soft palate. She has also had severe attacks of neuralgia, and lost the hair from her head; but the latter has again grown. She has no eruption upon her skin; and her sleep, weight, and appetite are all sufficient.

The ulcer was touched with a solution consisting of one part of the acid nitrate of mercury to ten parts of water. A poultice of slippery-elm was then directed to be applied to the nose. Internally the patient was ordered—

Sodii iodid., grs. iij;
Hydrarg. chlor. corros., gr. 1-10;
Ext. hyoscyam., gr. j;
t. d.

CONTRACTION OF ADDUCTOR MUSCLES OF THE THIGH.

A little boy, C. M. W., aged 6 years, was brought from the interior of the State on account of supposed hip-joint disease. There was no hurt to which the affection could be traced. The boy first commenced to complain last October. The limb has been in its present awkward condition eleven weeks. There is marked false anchylosis, the thigh is bent at a right angle with the trunk, and the leg is firmly flexed on the thigh. The limb is wasted, but there is no suppuration and no fluctuation about the hip. The fold of the buttock remains distinct. Prof. Gross gave it as his opinion that neuralgia and inflammation, attended by reflex irritation and contraction of muscles, were the cause of the mischief. The articular extremities are inflamed and softened, and care must be exercised in moving the limb forcibly; a fracture might result. There is intense muscular contraction, the adductor muscles in particular, when the limb is partially abducted, standing out in bold relief.

Under chloroform the leg was extended upon the thigh, but subcutaneous division of the adductor muscles had to be resorted to before the thigh could be extended upon the body. By means of a weight attached to the limb by adhesive strips, and passed over a pulley, extension will be kept up, the thigh being well bathed once or twice daily with some stimulating liniment. The child's bowels being torpid, one grain of blue mass and two grains of jalap will be given every third night, followed by some mild aperient in the morning.

CORRESPONDENCE.

DEAR SIR,—In the present contest as to the possible change in type of disease, the quotation I append may be of interest as showing that as early as 1609 there was some general belief as to a change having taken place in the human constitution which caused bleeding to be badly borne. I lit on the statement in Fuller's "English Worthies," ed. 1762, p. 186, and traced it to Dr. G. Hakewill, "An Apology or Declaration of the Power and Providence of God in the Government of the World," London, 1635, fol., p. 242. He quotes there this letter from Dr. Deodate to a neighboring squire.

Yours, etc.,
S. W. M.

"Tristram was a gardener by his occupation, living at Branford in this county. This man, Anno Dom. 1609, fell into a most violent inflammation of the lungs, accompanied with a terrible feaver, shortnesse of breath, stitch of both sides, dry cough, and an unquenchable thirst. Dr. Theod. Deodate being his neighbour (then physician to Prince Henry and the Lady Elizabeth), beholding him of a ruddy and sanguine complexion, adventured to let him blood, though he was of threescore and sixteen years of age. Once he let him blood about twenty ounces, by which evacuation (his blood being extremely putrified) he felt ease for three hours, but afterwards all his accidents returned as violent as before.

"Next morning he repeated the bleeding in the same quantity, whereby the patient only found a momentary ease, his pain returning as violent as before.

"The third day, remembering the rule of Hypocrates, that blood must be let to the changing of the colour, he adventured again on as copious a *phlebotemy* as before, whereby the sick man found an extraordinary ease, who in three days had lost more than *sixty* ounces of blood.

"This Tristram survived eight yrs. after, and dyed anno 1619, a most eminent instance against those who endeavour to prove the decay of the world because men cannot spare so much by blood-letting as in former ages.

PHOSPHORUS AS A REMEDY IN SKIN-DISEASES.—An abstract of a paper on this subject, read before the Clinical Society of London, by Dr. Broadbent, appears in the *London Lancet* for April 22. "If," he says, "the action of remedies and poisons on the human organism is due to their chemical properties, substances allied chemically ought to have an analogous physiological and therapeutical influence, or the diversity in their action ought to be explicable on chemical grounds. In other words, chemical groups should form therapeutical groups. . . . The group of which phosphorus is the head chemically, and of which arsenic is the chief representative in therapeutics, affords an opportunity for the application of the test. Its four members, phosphorus, arsenic, antimony, and bismuth, stand in the order named in regard to equivalent numbers, physical properties, and chemical energy; and their compounds with other elementary bodies form analogous series. Excluding bismuth, which, from its feeble affinities and tendency to form insoluble compounds, may be considered inert, there is, in the mode of action of phosphorus, arsenic, and antimony, as poisons, and in the tissue-changes they induce, a parallelism as remarkable as that of the chemical properties of these bodies, both in the energy and in the character of the physiological effects. The opportunity for bringing out further therapeutical parallelism is furnished by the well-known curative action of arsenic in certain classes of skin-diseases, such as some forms of eczema and psoriasis." Phosphorated oil was given in doses of from four to eight minims to six cases of eczema, and to the same number of cases of psoriasis. It effected a cure in every case except one of the former. Two of the cases of psoriasis proved rebellious not only to phosphorus, however, but to arsenic, and all treatment, general and local.

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THE MEDICAL TIMES.
A SEMI-MONTHLY JOURNAL OF
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THURSDAY, JUNE 15, 1871.

EDITORIAL.

THE LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

I.

THE now venerable College of Physicians was only fifteen months old, and had held but a limited number of sessions for the general purposes of organization, when at the stated meeting in April, 1788, the subject of a library was first introduced to the attention of the members. A series of by-laws was then offered, one section of which was at some future day to refer to the prospective library of the College; but the probabilities of its early establishment must have been considered very slight, as nothing but the bare caption, "Section VII. Library," without one word of accompanying text, is to be found at that date upon the records. The College, then in its infancy, numbered but few members, but they were the representatives of the earnest, active, learned men of the profession, who were not likely to let so important a subject slumber. The new medical organization had been formed at a time when the profession ranked very high in the scale of ability, skill, and social worth, and it enjoyed a large share of the confidence and appreciation of the public. The city numbered at that time only about forty-four thousand inhabitants, and of these probably not more than fifty were physicians. In the annals of those days* we find a full "list of all the physicians and surgeons, as they existed in Philadelphia soon after the peace of 1783," forty-two, all told; and this must have represented very nearly the numerical strength of the profession at the time of the foundation of the College of Physicians, four years later. Twenty-two, or about one-half of these, were among the earliest founders and Fellows of the College, and but one of the whole number lived west of Fifth Street, most of them residing in Water, Front, and Second Streets. The meetings of the College being then held at the University, in Fourth Street below Arch, the College and its nucleus of a library were therefore convenient and accessible to the whole profession. We cannot dwell on this subject further without entering too minutely into details that are somewhat foreign to our more limited subject, which is rather a sketch of the rise and progress of the valuable library of the College than of the College itself.

* Watson's Annals of Philadelphia, vol. ii. p. 386.

The men who founded the institution were those, however, who gave the first impetus to the growth of the library, and they should not, therefore, be passed over without mention. They included Dr. John Redman,—the first President of the College,—an eminent retired physician; several of the professors in the University of Pennsylvania and the College of Philadelphia,—such as Drs. William Shippen, John Morgan, Benjamin Rush, Adam Kuhn, James Hutchinson, Samuel Powel Griffitts, and Caspar Wistar,—Dr. Chovet, an anatomical lecturer of ability and eccentricity, and others, reminiscences of some of whom may be found in the work already referred to.

At the June meeting of the College in 1788, Drs. John Jones, Samuel Powel Griffitts, and Caspar Wistar were appointed a committee to report a plan for the formation of a library for the use of the College, whose report was subsequently considered and reconsidered, and a resolution adopted that "the several members of the College be requested to send to the Secretary such books as they mean to present to the College." This request or recommendation has lost none of its force by the lapse of time, and is quite as applicable to the Fellows of these later days as to those whose contributions were, during the expiring years of the eighteenth century, solicited in behalf of the young and struggling library. The new College must have had this subject very much at heart, for scarcely a meeting was held during the year 1789 at which the matter was not agitated. The first donation of books had already been received, and there was hope that the good example might speedily be followed. Dr. John Morgan had in January of that year requested the acceptance by the College of several medical works, and to him, therefore, belongs the creditable pre-eminence of being the initiator of what is now the largest and best medical library in the United States. The College, as we shall presently learn, could scarcely at that time have been the fortunate possessor of a bookcase, and the anticipation of prospective donations and purchases must have been a source of no little embarrassment. The Censors and Secretary seem to have had assigned to them the duty of collecting donations of books, and of procuring a suitable place for keeping them and a person to attend at stated times; but the office of Librarian must have been comparatively a sinecure,—the library being probably too small to require his services,—for we find no one mentioned in connection with it for the next three years, when in March, 1792, Dr. Nicholas H. Waters volunteered to assume its duties for one year, and he was probably the first Librarian the College ever had.

Even at this early day (1789) the College took steps to enrich the literature of the profession by the contributions of its own Fellows, and to publish a volume of its transactions as often as materials were afforded. A letter was also addressed "to the most respectable medical characters in the United States," requesting such communication and information from them as might tend to promote the interests of the College and

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of medicine, and stating also that it was their desire to get up a Pharmacopœia. A hundred copies of this letter were distributed throughout the country, and Thomas Dobson, of this city, offered to print a volume of the transactions "at his own risque." This early publication of the College, which occurred in the fall of 1793, was important not only because it aroused a general interest in its proceedings, but also because it laid the foundation of a system of exchanges which soon became a valuable means of supply of journals and transactions to the library.

In July, 1789, in conformity with a by-law respecting the formation of a library, Drs. Jones, Parke, and Wistar were appointed a committee to prepare a list of books to be purchased at a cost of not more than fifty pounds, Pennsylvania currency; and at the meeting in October they were directed to send to Amsterdam for as many of the European continental publications as was possible under this appropriation. A fair illustration of the tardiness of communication at that time between the Old World and the New — or perhaps of even more tedious custom-house circumlocution than now prevails—may be found in the fact that thirteen months elapsed before the committee were enabled to report that the books "had arrived in sheets and were deposited at the Secretary's house," from which, after being bound in plain calf, they were transferred to the hall of the College. But the miniature library had in the mean while (March, 1790) received accessions of valuable books, by the death of one of its most worthy members, Dr. John Morgan, who bequeathed to the College the works of Hippocrates, Galen, Morgagni, and Harvey, the whole making twelve volumes in folio and one in quarto. As, in the words of Dr. Rush, "the historian who shall hereafter relate the progress of medical science in America will be deficient in candor and justice if he does not connect the name of Dr. Morgan with that auspicious era in which medicine was first taught and studied as a science in this country," so also may it be justly said that no sketch of the early history of the College of Physicians or its library is complete without a tribute of acknowledgment of his profound interest in its welfare.*

In December, 1791, the Secretary cheered the College with the information that the books were now placed in a case in the hall of meeting; but the case could not have been a very large one, as upon the arrival of a fresh package from Europe the following year, only the bound ones could be accommodated, and the Secretary was obliged to keep the unbound ones at his own house. The College left the University room about this time, and held their first meeting at the hall of the American Philosophical Society, January 3, 1792. At this time books were taken out only at the close of each monthly meeting, and a fine of two shillings and sixpence was imposed on every careless or delinquent Fellow who kept a book out beyond that time, with an additional fine of a dollar for every additional month; and the Censors reported the condition of the library every July.

Dr. Michael Leib succeeded Dr. Waters as Librarian during 1792–3, but for many years afterwards we find no mention of the appointment of any other Fellow to that position, and presume that no one thought it worth his while to spend his time in vain efforts to arouse the enthusiasm of the College in behalf of a small and unpretending library, such as it then was. The College was, indeed, too poor to import any more books from abroad. The number of medical societies was very limited, the facilities for publishing were restricted, and the means of intercommunication were so deficient that there was probably but little prospect of any great increase in domestic books and journals. We find nothing on record, in any annals of those days, to show that the medical men of the closing years of that century had accumulated large libraries, from which the College could, either then or prospectively, hope to add to the value or the richness of their own collection. Of the early founders, Drs. John Morgan, Griffitts, Rush, Benjamin Smith Barton, Shippen, and Jones seem to have been the only ones who, during a long series of years, gave to the young library a few contributions occasionally from their own shelves; and yet there was hardly a meeting at which the subject of a library was not brought up for consideration, as a sufficient reminder to the Fellows of its great and pressing needs.

The yellow fever of 1793 interfered with the prospects of the library by diverting the energies of all the best physicians from the lighter paths of literature to the more practical fields of professional duty, and the public health became a consideration paramount to every other. The College in this epidemic, as in that of a few years later, met very frequently to give the Governor such solicited advice as might aid in the mitigation of the disease, for in those old-fashioned days it was not an uncommon event for the State Executive to lean for professional assistance on those whose sagacity and skill commanded universal respect. Between the periods of the two epidemics of 1793 and 1797, however, the library made some little progress. A fresh supply of books was sent for to Amsterdam by the ship William Penn; the Medical Society of London had transmitted a few parts of its Transactions; and the Censors had, in January, 1797, prepared a new list of books for importation, which included but few solid works, and mainly embraced "the different periodical

* Dr. Rush, his biographer, states that during a visit to the celebrated Morgagni at Padua, the latter was so pleased with the doctor that he claimed kindred with him from the resemblance of their names, and on the blank leaf of a copy of his works, which he presented to him, he inscribed with his own hand the following words: "*Affini suo, medico præclarissimo Johanni Morgan, donat auctor.*" This inscription has been extensively quoted on the authority of Dr. Rush, but must have been given by him merely from recollection, as on the title-page of vol. i. of the works of Morgagni referred to—now in the library—we find the following words plainly discernible: "*Viro experientissimo et humanissimo D. Di. Joanni Morgan auctor;*" and on the title-page of vol. ii. the following: *Viro de re anatomica bono medico Do. Dri. Joanni Morgan auctor.*" Dr. Morgan was evidently a man who aimed to be a step in advance of his contemporaries, for we learn also that he was "the first man who ventured to carry a silk umbrella, and also an innovator in first introducing the practice of sending to the apothecary for all the medicines wanted for the sick."

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publications on medicine—viz., reviews, journals, etc. —which are published on the continent of Europe in the Latin or French languages." The yellow fever of 1797 and of 1799 again occupied the attention of the College and diverted their interest from the claims of the library; and the same disturbing influences were at work during the subsequent year (1800). These months of earnest and serious labor were not, however, lost to literature, for the results were embodied in a volume of "Facts and Observations relative to the Nature and Origin of the Pestilential Fever which prevailed in this City in 1793, 1797, and 1798," which was printed and distributed under the auspices of the College.

We have no record of the numerical condition of the library at the commencement of the present century. Donations were very infrequent; the College had not the full and untrammelled use of its own room, as a stipulation made with the Philosophical Society allowed the latter also to place its library and apparatus in the same apartment; and the College seemed to be sluggishly content with the tardy increase of its books, as if it feared that additions to their number might crowd the scanty book-shelves, or as if it never dreamed of the brilliant future that was in store for the library. The annual appropriations for the library from 1787 to July, 1794, amounted altogether to sixty pounds, but they were for many years entirely omitted; and, feebly depending for a more vigorous vitality on the occasional attentions of donors of a volume or two at a time, the library grew but little in dimensions or importance for at least ten years. Dr. William Currie, in June, 1800, presented about twenty volumes to the College, including ten of Adrianus Spigelius de Humano Corpore; but the good example was not followed very speedily. The bookcase must also have been a place of deposit for pathological specimens, as in July of that year we find a little stir made at the stated meeting in consequence of the abduction from it of a preparation of a heart of an extra-uterine fœtus. In 1803, Dr. John Coakley Lettsom, the eminent physician and author, who had been elected an Associate of the College the year previous, sent out from England as a present to the College library a number of valuable works, such as Haygarth's Medical Transactions, 4 vols., Lettsom's Hints, 3 vols., Examination of Jenner's Petition, etc. Dr. Lettsom was the first person who, after Jenner's discovery of vaccination, transmitted vaccine lymph to this country. He was the founder of the London Medical Society, was one of the foremost in the establishment of the Royal Jennerian Society, etc., and an associate of whom our own College of Physicians might well feel proud.

In 1805, a committee to whom the duty had been assigned reported the selection they had made of papers for publication in a volume of the Transactions; but the suggestion was left unheeded for several years. The library was reported by the Censors as being in good order, and the admission-fee for new Fellows, which seems to have been fixed long before at a large amount ($26.67), partly with a view of aiding the library at the inception, was now reduced to fifteen dollars. These are the only items of interest connected with the library up to the year 1815. It could not be expected that the little interest taken in the College by its members during the decade from 1805 to 1815 would redound in any way to the growth of the library. It was quite an uncommon occurrence for a quorum to be present at the meetings, and trifling subjects of discussion on non-professional topics of rent, etc., for a long series of monthly meetings constituted the whole programme for the entertainment of the College. An epidemic of yellow fever might have stirred up their tired energies and given life and animation to the proceedings, and perhaps have called a sufficient number of members together to induce them to make a united effort in behalf of the library; but, fortunately for the public, the general health of the community remained unaffected,—and the library languished. For some of this neglect, the war of 1812 is perhaps partly responsible.

From 1815 to 1820 the College grew more active, but its library is credited with but one donation, that of a Spanish work on Tifus Icterodes, by Don Francisco Flores Moreno, from the author. The Pennsylvania Hospital sold to the College ten volumes of the Edinburgh Journal for £6 5s., equivalent in those days to $27.77. In 1818, the first constitution and by-laws was published, and also Dr. Wistar's eulogium on Dr. Shippen, which had been delivered a long while before. The catalogue of books was so imperfect that Drs. Parke and J. W. Moore were appointed to prepare a new one, which was completed in January, 1819, and even at this time the College could not boast of the existence of a Librarian. In those days it was the custom of societies to meet "at early candlelight," and we presume the College kept the same unobjectionable hours. Drs. Thomas C. James and J. W. Moore, who had been selected to make out a list of foreign and domestic periodical publications to be purchased for the library, reported the following, which may probably be accepted as the type of the most reliable medical issues of that day: The Edinburgh Medical and Surgical Journal, London Medico-Chirurgical Transactions, London Medical Transactions, Medical and Physical Journal, New England Medical and Surgical Journal, Philadelphia Eclectic Repertory, and London Medico-Chirurgical Journal and Review.

With the exception of an item of two dollars for "cleaning the bookcase and books, and a piece of stained paper for covering the same," in 1825, and another of six dollars for painting the bookcase, in 1829, nothing of interest is to be found on the records in relation to the library until 1834, when the first regularly-constituted Committee on the Library was appointed, consisting of Drs. J. W. Moore, William S. Coxe, and Simon A. Wickes, who in January, 1835, made a verbal report upon the state of the library, "showing that it is in a bad condition and going to decay;" doubtless the result of a third of a century of flickering energy and inactivity. Dr. Henry Bond succeeded Dr. Wickes in 1836, after the death of the latter. To both of these committees is due the credit of adopting earnest mea-

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sures for the preservation and safety of the library. In June of that year they presented an excellent annual report, the first which is to be found *in extenso* upon the minutes. "The collection of books," it says, "belonging to the College includes 31 folio volumes, 67 quartos, and 193 octavos, making a total of 291, besides a number of unbound pamphlets. . . . Most of these books appear to have been presented by the members of the College, or by the authors or translators of the works, many years since. Being principally the productions of ancient authors, this circumstance, together with the inconvenient situation they occupy, causes them to be very little read, and more than a year has elapsed without a single volume having been called for. They are in fact to be regarded as a mere foundation, although a valuable one, for a medical library." The committee also indulge a hope that when a safe and easily accessible place of deposit shall be obtained for the books, funds "will be appropriated more frequently and more abundantly, so that the collection may become an object of greater interest, and may better correspond with the dignity of so ancient and so honorable a literary body as the College of Physicians of Philadelphia."

About this time the "Kappa Lambda Association of the United States," under whose auspices twelve volumes of the North American Medical and Surgical Journal had been published, with Drs. Hodge, Bache, Meigs, B. H. Coates, and La Roche as its editors, dissolved, and transferred to the library of the College for safe keeping its journal of proceedings and other manuscript documents, which, though of no special value to the latter, were sufficiently gratifying indications of the feeling of confidence entertained by the profession in the permanency of the College. The members of the Kappa Lambda Society or Association, by the encouragement of social meetings at the houses of members, where tea or coffee and cake constituted the frugal fare, laid the foundation for the Monday evening and other similar medical clubs.

Dr. Coxe died in 1837, and Dr. Squire Littell was appointed in his stead. The College now again began to agitate the question of new accommodations, though the size of the library was hardly formidable enough to excite much anxiety. The Library Committee remained without change for five years, when, in 1842, Dr. Francis West succeeded Dr. Bond, and in 1843, Dr. B. H. Coates, Dr. Moore; and during this period the unvarying annual report was that *one* volume and a few pamphlets had been added during the year, and that little or no use of the library had been made by the Fellows. An effort was made in the fall of 1840 to secure, either by purchase or in trust, "the large and valuable collection of medical books accumulated at great expense for a long course of years by Dr. John Redman Coxe;" but the matter seems to have been dropped, as no subsequent action on the part of the committee is reported.

The same fate seems to have attended a grand combination movement, instituted in October of the same year by a joint committee in behalf of the College of Physicians, the Philadelphia Medical Society, and the Philadelphia Medical College, to form a company to be entitled the "Medical Hall Association of Philadelphia." One of the main motives for its establishment was that "a commodious, safe, and permanent depository for a library" might thus be created; and it was to be the duty of the committee "to apply to each physician, requesting him to inform the committee in writing what books he will contribute, either as donations or deposits, towards the formation of a library." Whether the members of the College shrank from sharing a divided responsibility, or feared that the scheme was too grand and expensive, or wholly impracticable, it is difficult now to say; but they probably took the most judicious course of action when they discharged the committee from further discussion of the subject, and refrained from its renewed agitation. At the same meeting, however, another committee was appointed, to ascertain what amount would be sufficient to authorize the erection by the College of a building for its own accommodation; but they soon afterwards reported that the cost would probably exceed fifteen thousand dollars,—so large a sum in those days that "altho' the proposed plan met general approbation and many liberal subscriptions were promised, they regret to say a sufficient amount cannot be immediately raised to authorize its erection." The project of a new building was therefore temporarily abandoned.

The library received a fresh impulse in 1844, in consequence of a communication from Dr. John C. Otto, stating that he was about to leave the city, and would be willing to dispose of his library,—"a valuable collection of works on medicine and the collateral sciences, all in a good state of preservation." The College purchased the books and bookcases for two hundred dollars, and they were to be deposited, under the control and custody of the Library Committee, in a room over Dr. Hodge's office at Ninth and Walnut Streets; and yet, several months later, the committee reported that they had heard of the purchase of Dr. Otto's books, but had not yet obtained control of them. The committee were instructed to report a plan "for rendering the library more useful and accessible to the Fellows, and to insure its permanent increase in size and value;" and in June they made several valuable suggestions, including one in regard to the appointment of a librarian and of a proper hour for his attendance,—"one hour, twice a month, would be as much as is expedient to devote to that purpose"—one of these hours being at the session of the College; the preparation of an index-catalogue; the obtaining of "a better collocation for the bookcases," etc. The Library Committee appointed in August, 1844, consisted of Drs. Moore, Coates, and West, and they were associated together for several years. In December, the question of removal to the new Mercantile Library building, corner of Fifth and Library Streets, was agitated, and arrangements were subsequently made for that purpose. The library was reported as useless for want of care and arrangement,

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and its benefits entirely lost to its members. The books, except Dr. Otto's, were kept in a case on the first landing of the staircase, and altogether the College became so dispirited in regard to the progress of the library, that it was proposed to establish a medical athenæum, to be open daily under the care of the Superintendent of the building, with all the foreign and domestic journals and current medical literature.

In July, 1845, the College met for the first time at the Mercantile Library; and from this period may be dated a reawakened and sustained interest in the library of the College, becoming more and more earnest every year of its existence, and in some individual instances warming almost into affection.

ECONOMY IN HOSPITAL BUILDING.

OUR readers are probably aware that plans are on foot for the establishment of two new hospitals of large size in this city. For one of these, under the auspices of the religious denomination of Presbyterians, the funds will be supplied by charitable individuals; the other, as yet merely proposed, is to be connected with the Medical Department of the University of Pennsylvania, and will probably derive part of its support from the fees paid by students. For the building of each, however, a fund must be raised, and administered by managers or trustees.

We hope that in the carrying out of these enterprises it will be remembered that the cost of the buildings is but the first item, and that if this be reduced to the lowest point compatible with comfort, convenience, and durability, there will be just so much gained towards the funds for subsequent operations. A magnificent pile, of unexceptionable architecture and splendid proportions, can only be useful as a hospital if it is well planned for ventilation, drainage, lighting, heating, and the general comfort of the inmates. And if the ornamentation has swallowed up all the money raised, and the number of patients must be cut down, and the current expenses met by incessant and strenuous begging, can the "all ruffle and no shirt" system have an apter illustration?

On the other hand, if, for example, a fund of $100,000 be contributed towards the establishment of a hospital, and the cost of building and fitting up can be kept within $50,000, there is obviously a sum of $50,000 for investment, the income from which would go towards providing for the current expenses of the institution.

It may be thought that this estimate of the cost of building is too low; but the Hall of the College of Physicians in this city—a very substantial and well-finished structure—cost (including $14,408, the price of the lot) $39,658, while the Children's Hospital was put up for $32,000 (exclusive of the price of the ground). What we would urge, however, is the principle, that in the administration of funds raised for such purposes a wise and prudent forethought should be observed, so that the generous liberality of the donors may bring forth its fullest fruits.

THE CHANGE IN THE SURGICAL STAFF OF THE PENNSYLVANIA HOSPITAL.

DR. AGNEW, whose appointment to the Professorship of the Principles and Practice of Surgery in the University of Pennsylvania we announced in a recent number of *The Medical Times*, has resigned his position as one of the Attending Surgeons to the Pennsylvania Hospital. Dr. Agnew is conscientiously opposed to women engaging in the study and practice of surgery, and, as he cannot therefore consistently take any part in their education, he sent to the Managers of the Hospital, just before their last meeting, a letter, in which he declined a re-election if it were made obligatory upon the medical staff, as it was feared it might be, to give instruction to female students. The Board of Managers did in effect adopt a resolution declaring it to be the duty of the physicians and surgeons of the Hospital to give such instruction, and, Dr. Agnew's letter being under these circumstances regarded as virtually one of resignation, they elected Dr. Richard J. Levis in his place. Dr. Agnew will not, we are glad to say, be lost as a clinical teacher to Philadelphia, for, as Professor of Surgery, he will continue to deliver clinical lectures at the University of Pennsylvania, and there is little doubt that the material for these lectures will soon be furnished by a hospital directly under the control of the Medical Faculty of the University.

The other members of the medical and surgical staff were all re-elected. The new surgeon, Dr. Levis, in addition to having been at one time Attending Surgeon to the Philadelphia Hospital, is at present one of the surgeons to the Wills Ophthalmic Hospital, and Lecturer on Ophthalmic and Aural Surgery in the Jefferson Medical College of this city; he will therefore bring to the performance of his new duties much experience, not only as a hospital surgeon, but also as a teacher.

REVIEWS AND BOOK NOTICES.

CHEMISTRY, GENERAL, MEDICAL, AND PHARMACEUTICAL, including the Chemistry of the U. S. Pharmacopœia. A Manual of the General Principles of the Science and their Applications to Medicine and Pharmacy. From the second and enlarged English edition. By John Attfield, Ph.D., F.C.S. 8vo, pp. 552. Philadelphia, H. C. Lea, 1871.

The plan of the work before us, although somewhat different from that ordinarily followed in similar treatises, has been chosen by the author, whose experience in teaching has been large, since it is that which, "in his opinion, best meets the requirements of medical and pharmaceutical students."

Certainly the bugbears of those medical students whose opportunities for the study of chemical philosophy have been limited are dispelled in a way which merits their sincere thanks; while a great deal of the confusion which seems to exist as regards atoms and molecules, quantivalence and equivalent weights will be removed from their minds, and withal so gradually, that the wonder will be that it ever existed.

That this should happen, however, the book must be carefully read; and if, in addition, any one will take the trouble to perform the various experiments mentioned (the necessary apparatus can be bought for a trifling sum), we venture to say that his time will be well spent, and that he will find himself the better able to take advantage of lectures.

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In its mode of teaching, the book fills a place hitherto vacant; but we could wish that the author had bestowed more time upon medical chemistry proper, a branch nowadays too comprehensive to be treated so briefly as it is in this work, without omitting much that is important. For instance, there is no mention of the fact that other substances besides grape-sugar will precipitate the suboxide of copper in Trommer's test, and the author implies that there is no way of estimating with accuracy the amount of urea in any specimen of urine, an error which should have been avoided in a book part of which is devoted to describing the mode of performing quantitative analysis in general. There is no mention, moreover, of Pettenkofer's test for the bile-acids, nor of the means for their detection in the urine, matters which should have been touched on, however briefly. Indeed, we believe it to be impossible for any one to cover the ground our author aims at, in the space he has allotted to himself,—impossible that a book should be an encyclopædia of chemical facts, and teach each fact well, without trespassing on the field so completely occupied by such works as Mr. Watt's Dictionary of Chemistry. Nor is it necessary that this should be attempted.

What the student, here at least, wants, is what Mr. Attfield, in the first part of his work, to a great extent supplies,—a comprehensive treatise on chemical philosophy and its more simple and striking applications. This once mastered, he must go to what has been written with a special bearing on the subject of his studies for those accurate and complete directions which alone will enable him to work and experiment satisfactorily.

Mr. Attfield has of necessity adopted the new theories and nomenclature. He has, however, retained—judiciously, we think—as much of the old terminology as is not absolutely incompatible with the theory which he follows.

Beiträge zur Kenntniss der Nerven des Froschlarvenschwanzes. Von E. Klein, Privat Docent für Histologie. Sitzungsb. d. k. Acad. d. Wissensch. in Wien. Mai, 1870. (Contributions to our Knowledge of the Nerves of the Tadpole's Tail.)

In these researches Dr. Klein used both fresh preparations and those stained by chloride of gold. In the former case the tail was cut off from the living tadpole, protected from pressure by strips of paper placed under the covering-glass, and immersed in a half per cent. solution of common salt. Such preparations, carefully made, allow, during the first half-hour, the nerves to be followed to their finest ramifications. His gold preparations were immersed in half per cent. solution of the terchloride for half an hour, and then allowed to remain for twenty-four hours in water slightly acidified by acetic acid, and exposed to a strong light. They were then transferred to strong alcohol for fifteen to twenty minutes, to enable him more readily to strip off the epithelium from the upper surface with a pair of fine forceps, and then mounted in glycerine. Dr. K. also made sections of the tails thus hardened.

From the central nervous stem (axis) arise nerves of considerable size, some with, some without medullary sheath, and these giving off branches, form a plexus for the most part devoid of medullary sheaths, and containing in their neurilemma numerous oblong and triangular nuclei.

On such nerves we can readily make out the fibrous structure of the axis-cylinder. From this network arises a much finer one, lying immediately below the epithelium, in which the interspaces are so small and the fibres so close that the nucleus of a single epithelial cell may cover from two to four interspaces; and in this are interspersed cells with short pointed processes in connection with the nerve-fibrils, which Dr. Klein regards as multipolar ganglion cells.

He believes this network to be the peripheral termination of the nerve-fibres, and holds, with Hensen, that the nerves do not have any direct connection with the cells of the tissue of the tail, as Eberth has maintained.

The network is interesting in a physiological point of view, since Gerlach has recently shown that the sensitive nerves which enter the posterior columns of the spinal cord unite there in a dense network. The author also calls attention to numerous slightly glistening, sharply-defined fibres in the tissue of the tail, which, like the nerves, become stained by treatment with gold, but can readily be distinguished from them by their course and distribution, as well as their entire want of nuclei. They have three principal directions: first, parallel to the axis of the tail; second, oblique from the axis to the periphery; and third, from the epithelium of one side to that on the other, presenting a spiral form. Dr. Klein believes these fibres to be a variety of elastic tissue.

In a subsequent number of the same Proceedings (February 9, 1871), Dr. Alex. Chrschtschonovitsch, of Kasan, gives the results of his investigation as to the distribution of the nerves of the vagina in the rabbit and the dog. In the former, the meshes of the network of nerves are finer than in the latter, but in both their peripheral termination is in a subepithelial network, which gives off a still finer one surrounding the lower layers of epithelial cells. The bundles of unstriated muscles are also surrounded by nerves, which give off fine filaments, surrounding the individual muscle-cells. The author, however, was never able to trace any connection of the nerves with the epithelial or muscular cells, or with their nuclei.

We have been able from personal observation to corroborate many of the statements of Dr. Klein, and cordially recommend to our readers the tissue of the tadpole's tail as a field for the study of the minute structure of capillaries and nerves.

When properly stained with gold, we know of no more beautiful or instructive microscopic object.

Hair as a Suture and Ligature. By John T. Darby, M.D., of Columbia, South Carolina, Professor of Anatomy and Surgery, University of South Carolina. 8vo, pp. 20. Louisville, Bell & Co., 1870.

This pamphlet, which has apparently been first read before a medical association, then printed in the *Richmond and Louisville Medical Journal*, and is now issued as a separate article, bears the marks of extreme haste in its inception, with utter neglect of all revision. The formation of its sentences is careless and inaccurate, making the paper as a literary production wholly unworthy of the reputation of Dr. Darby.

Dr. Darby does not claim for himself priority in the use of hair sutures, it being stated that the idea occurred to Mr. T. Smith, of St. Bartholomew's Hospital, London, in 1861. To remove the difficulty which presents itself in securing a firm knot, the following directions are given as a modification of the surgeon's knot, which is "readily made by passing the end from the right to the left, and the left to the right; take then the end in the left hand, and pass it through three times, and draw down the loop; cross the ends back again from left to right, and take the end in the left hand, pass it through twice, and draw down the loop; a firm knot is then formed, which can be made still more secure by crossing from right to left, and passing the end in the left hand through, and then draw down once." For fear we should not succeed in the notoriously difficult task of clearly describing a knot, unaided by diagrams, we have thought it best to give the author's own words, that the reader may judge for himself. If our own efforts to understand this knot are crowned with success, we shall think the hair suture, from its flexibility and imperishable nature, worthy of a trial.

Dr. Darby gives the history of twenty cases as samples of those in which he has successfully used hair as a suture and ligature. For the latter purpose the requisite strength is obtained by twisting and agglutinating several hairs together. Dr. Darby prefers hair taken from the tails of horses to that from the tails of mares, as uninjured by urinary saturation, and advises that it should be first steeped in a solution of carbolic acid.

Notwithstanding the defects indicated above, the paper may be regarded as evidence of a praiseworthy desire to add to the resources of surgery in the treatment of wounds.

BOOKS AND PAMPHLETS RECEIVED.

A Practical Treatise on the Diseases of Infancy and Childhood. By Thomas Hawkes Tanner, M.D., F.L.S., etc. Third American Edition, from the last London Edition. Revised and Enlarged by Alfred Meadows, M.D., London. 8vo, pp. 559. Philadelphia, Lindsay & Blakiston, 1871.

The Principles of Psychology. Part I.—The Data of Psychology. By Herbert Spencer. 8vo, pp. 142. New York, D. Appleton & Co., 1869.

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TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a stated meeting of the Pathological Society, held May 11, 1871, John Ashhurst, Jr., M.D., in the chair,

DR. C. T. HUNTER exhibited a specimen of *myxoma of the arm*, with the following history:

Jane S., æt. 60, single, a native of Ireland, applied at the surgical clinic of the University of Pennsylvania, May 3, 1871. She stated that she had always enjoyed very good health, and that her family was free from any constitutional disease. Her attention was first attracted about two years ago to a small tumor, about the size of a hazel-nut, situated two or three inches above the right elbow and on the outer aspect of the arm. For a year and a half its growth was very slow, but during the last six months it had increased quite rapidly in size. She had never suffered any inconvenience from it.

When examined by Dr. Agnew, it was about the size of a large orange. It was movable, and severe handling caused no pain. The overlying integument was not adherent to the tumor, but it was somewhat discolored from abnormal enlargement of its capillaries. The axillary glands were not involved. Dr. Agnew, on dividing the integuments, found the tumor situated in the superficial fascia, and surrounded by a well-defined cyst-wall which had become adherent to the deep fascia. The cephalic vein as it ran along the under surface of the tumor was divided by the operation; the external cutaneous nerve was separated from the tumor by careful dissection. Both ends of the divided vein were secured by two acupressure pins; only one small artery required a ligature. The pins were removed at the expiration of forty-eight hours, and the case is rapidly progressing towards recovery.

Dr. Hunter also read the report of the *microscopic examination of the tumor* by Dr. W. F. Jenks:—

"The portion of the tumor presented to me for examination consisted externally of a white, dense, fibrous membrane, or capsule, from which larger and smaller prolongations were thrown out into the interior of the growth, which was gelatinous in structure, of a transparent grayish color, and finely sprinkled with minute yellowish patches. Other parts were of a deep rosy color, evidently due to the great vascularity of the tissue in these parts. Under the microscope, the irregular network could be seen formed by delicate bundles of connective tissue and elastic fibres, which divided in all directions, forming imperfectly closed spaces in which were lying polymorphous cells,—round, star-shaped, and spindle-shaped,—separated from one another by a large amount of intercellular substance which was precipitated by acetic acid,—the whole forming the so-called myxomatous or mucous tissue. In places, these cells had undergone fatty degeneration, giving rise to the yellowish patches visible to the naked eye."

DR. W. F. NORRIS remarked that myxomatous or jelly-like connective tissue exists normally in the adult only in the vitreous humor, but is present in the fœtus in the Whartonian jelly of the umbilical cord and in the subcutaneous connective tissue.

Tumors presenting this structure are most frequently developed in the connective tissue beneath the skin and between the muscles. A favorite seat is in the subcutaneous connective tissue of the thigh. They are, however, not infrequent in the course of the nerves and arteries. Moreover, the polypoid growths of the nares, external auditory meatus, and uterus often exhibit the same structure.

DR. W. W. KEEN presented a specimen of *necrosed petrous portion of the temporal bone*. A history of the case in which it occurred will be found in the "Hospital Notes" of the present number of this journal.

DR. W. PEPPER presented specimens illustrating *disease of the aortic valves, hypertrophy of the heart and Bright's disease of the kidneys*, terminating in *sudden death from enormous development of gas following the ingestion of bean tea.*

W. B., æt. 43, a liquor-dealer by occupation, and of intemperate habits, had been subject to palpitation of the heart on exertion for several years, and for three years to shortness of breath and to frequent micturition. In December, 1870, œdema of the ankles appeared and rapidly increased, becoming associated with ascites in January, 1871. This soon increased to a great extent, and when first seen, about March 15, there were orthopnœa, pulmonary congestion, enormous ascites, and general anasarca, with free escape of serum through numerous ruptures in the derm over the legs and feet; the heart's rate was 96 to 104 per minute, with manifest hypertrophy of the ventricle and a soft, faint, systolic blowing murmur. The urine was rather scanty, very highly albuminous, and deposited numerous tube-casts, hyaline and granular.

Under the use of a pill of nitrate of potassa, squill, and digitalis, he improved markedly, with diminution of œdema and ascites, and relief to the pulmonary engorgement. On April 25 he obtained some beans, dried with the pods, and had a large amount of them boiled in two quarts of water down to one quart. This he drank in the course of a few hours, and soon afterwards became intensely oppressed with great distention of the abdomen, and died the same afternoon at five o'clock.

An autopsy on the following day revealed enormous tympanitic distention of the stomach and intestines, the tension of the abdominal walls being so great that when an opening was made in them a jet of the ascitic fluid was forced several feet into the air and continued for some minutes. The diaphragm was strongly forced upwards. The heart was greatly hypertrophied, especially in the left ventricle. There was extensive disease of the aortic valves, two of the leaflets being fused together and separated at the line of junction from the wall of the aorta. A large irregular calcareous mass sprang from the point of original attachment. A second calcareous nodule was found on the ventricular face of the third leaflet, so close to its base of attachment as to be much out of the blood-current. Still the lesion appeared remarkably great as compared with the feeble, soft, basic murmur heard during life. The arch of the aorta was moderately atheromatous. The liver was slightly cirrhotic and presented nutmeg congestion. The kidneys were hard, rather reduced in size, their capsule thickened and adherent, the cortex coarse and granular. Several small cysts and old embolic patches were found in them. While there is little doubt that the cardiac lesion was primary, it is probable that the renal disease was not merely a sequel, but a distinct Bright's disease supervening in the course of a latent disease of the aortic valves. The sudden death from pressure upwards of the enormously distended stomach and bowels upon the already laboring heart and lungs is an interesting and instructive clinical fact.

DR. H. ALLEN presented a specimen of *waxy liver with enlarged lobus Spigelii and fatty kidneys*, from a *syphilitic subject*, with the following history:

C. B., female, aged 26 years, single, intemperate, was admitted to the Philadelphia Hospital, December 27, 1866, with primary syphilis. Inguinal adenitis followed. By January 1, 1868, an eruption—the character of which is undetermined—had appeared; judging from the scars upon the body, it was probably of the pustulo-crustaceous type. When first seen by him, in October, 1870, the patient presented that profound anæmia so frequent in syphilis, was emaciated, and, from the ravages of alopecia, loss of incisor teeth, and general malaise, appeared to be older than she really was.

She suffered from attacks of diarrhœa, accompanied with tenesmus. Occasionally micturition was difficult. Both these latter symptoms could be explained by the condition of the lower bowel, which was ulcerated. There was, however, no stricture. The stomach was exceedingly irritable. She was supported during the last year of her life almost entirely on fluids, reliance being placed upon milk, with or without brandy. At times everything would be rejected and medication have but tardy effect in correcting the vomiting. During the past year these attacks of obstinate emesis frequently recurred. She suffered almost constantly from hemicrania and general osteocopic pains. There were no paralysis and no sequelæ of iritis or sore throat. She died exhausted, during one of her attacks of vomiting, May 8, 1871.

Autopsy twenty-four hours after death. Rigor mortis present. The *lungs* were healthy, except at the anterior central portion of the upper lobe of the left side, in which was noted an indurated condition, more particularly at the anterior free border of the lobe, immediately above the interlobular

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sulcus. Upon section the deposit was dull white in color,—was friable, and slowly sank in water.

Heart weighed eight ounces; normal.

Liver much enlarged; extended entirely across the abdomen; measured 12 inches from right to left, 7½ inches in greatest antero-posterior diameter, and 4½ inches through longitudinal fissure. Weight, 5 pounds 10 ounces. Texture firm, waxy, without nodules, indurations, or deposits. An interesting feature was observed upon its under surface. The *lobus Spigelii* was disproportionately enlarged and protruded forward. Instead of terminating at the edge of the transverse fissure, it passed over and beyond this line, so as apparently to compress the structures passing to and from the liver through the fissure. The portal vein was filled with a soft clot up to the point of contact with this lobe. Beyond and towards the liver the vessel was empty.

Spleen measured 5 inches by 3 inches, was of a dark purplish-red color, weighed 8 ounces, and was adherent to the diaphragm in great part. It was unusually firm, and without deposit.

Supra-renal capsules.—Right measured 2½ inches by 2 inches; left, 2½ inches by 1 inch; both were firm, without abnormality, beyond the difference in size.

Kidneys.—Left measured 5 inches by 2½ inches, and weighed 7½ ounces; right, 5 inches by 2 inches, and weighed 6½ ounces. Both were flabby, pale, and far advanced in fatty degeneration. The condition of the alimentary canal was normal, beyond a decided engagement of flatus in the cœcal end of the duodenum. The mucous lining of the great bowel was, unfortunately, not examined.

The skull-cap was thickened, and exhibited over the left frontal eminence a patch of recent hyperostosis of the size of a penny.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

AT a stated meeting, held May 1, 1871, W. S. W. Ruschenberger, M.D., in the chair,

DR. JAMES TYSON called the attention of the section to a saturated solution of acetate of potash as a preservative fluid for microscopic preparations of animal and vegetable tissues. It seems to have been first used by Doppel, and has been highly recommended by Max Schultze in his *Archiv für Mikroskopische Anatomie* for January, 1871. This fluid is said by Max Schultze to have all the advantages of glycerine, with none of its disadvantages. For a detailed account of the advantages, the members of the section were referred to an abstract of Max Schultze's paper in the number of *The Medical Times* for May 15. Not the least of them are the possibility of permanently mounting specimens without the primary use of a cell, and the length of time for which a specimen thus mounted will keep without the necessity of even a ring of cement around it.

Dr. T. had not yet made extensive use of this solution, but the authority recommending it was so high, and its use attended with so little inconvenience, that he had commenced its use, and wished to direct the attention of others to it. The constant advantage of the use of acetic acid in ordinary microscopic manipulation, and the increased utility of glycerine when containing acetic acid in the proportion of five or ten drops to the ounce, are well known; the effects of this important reagent are of course secured in this new solution of acetate of potash.

In the paper alluded to, no directions were given as to the best method of making the solution. For his own use he had saturated strong acetic acid with carbonate of soda. He did not know whether this would prove the most desirable method of making the solution, but proposed giving it a trial. He would present as early as possible the result of his experience.

DR. LEHMAN WELLS remarked that he supposed the absence of any tendency to crystallize around the margin of the thin glass cover, alluded to by Dr. Tyson, was to be explained by the deliquescent nature of acetate of potash.

DR. J. G. RICHARDSON observed that so marked was this deliquescent tendency that he thought a simple and certain method of obtaining the saturated solution was merely to expose the dry salt to a moist atmosphere, from which sufficient water would be absorbed in a short time to dissolve it. Acetate of potash appears in commerce in the form of granular masses, and never in a crystallized state.

GLEANINGS FROM OUR EXCHANGES.

CONTRIBUTIONS TO THE PATHOLOGY AND THERAPEUTICS OF DIABETES.—A. Dupré, Ph.D., Lecturer on Chemistry at Westminster Hospital, London, publishes in *The Practitioner* for February, 1871, some observations upon a young man who had suffered with diabetes for six months. It was found that the administration of three to eight ounces of honey was followed by a gradual diminution of urea from sixty-eight grains to fifty-six grains in twenty-four hours, on the two days preceding the honey diet, to twenty-four grains on the last day of the honey diet. The day after the honey was discontinued the urea went up to forty grains, though the patient took exactly the same diet, and was kept as nearly as possible under the same conditions. These results were confirmatory of former observations on the same patient.

Again, in the case of this patient, small variations in the amount of work performed, had a marked effect on the amount of urea excreted, increasing it. This fact is interesting in connection with the recent observations of Dr. Flint, Jr., on the urine of Weston the pedestrian (in which this older view was reconfirmed), and their subsequent criticism by the editor of *The Practitioner*, Dr. Anstie. Dupré's observations also showed an increase of urea with increased ingestion of food.

The chemical and analytical reasons which seem to the writer to point to the conclusion that the sugar found in the urine of diabetic patients has not been present as such in the blood, but is produced only by its passage through the kidneys, are thus recapitulated: 1. The oxidising power of the system for fruit-sugar is unimpaired, and as this sugar is certainly not more easily oxidizable than grape-sugar, the same may be assumed as true with regard to the latter. 2. The amount of sugar found in the blood of diabetic patients, both by Lehmann and the writer, is apparently insufficient to account for the great quantities of sugar contained in the urine of such patients. 3. The addition of even a moderate amount of honey to the diet of diabetic patients causes a marked diminution in the amount of urea discharged, and this fact seems difficult to reconcile with the notion that the large quantity of sugar found in the urine of these patients had previously existed in the blood.

INFLUENCE OF THE SYMPATHETIC UPON THE ORGANS OF THE FACE.—Dr. Sinitzin (*Centralblatt für die Medicinischen Wissenschaften*, March 18) has found that increase of the temperature of the eyeball, together with hyperæmia of its fundus, are among the commonest of the phenomena following removal of the upper cervical ganglia. The cornea of the eye on the side operated upon will also be found to possess a greater power of resisting the irritation of foreign bodies than that of the other eye. The paralytic phenomena usually observed in the eye after section of the trigeminal nerve within the cranium and in front of the Gasserian ganglion do not take place if the upper cervical ganglion be removed either before or immediately after this operation; and in some cases in which the paralytic phenomena have actually occurred, if they have not advanced to any great extent, and the surface of the cornea still continues to be moist and has not lost its brilliancy, no trace of the results of the section of the trigeminal will be observed after the lapse of a few days, and in other cases the changes in the eyeball will be arrested. The removal of the upper cervical ganglion will be followed by the cicatrization of the ulceration of the lips and eyelids to which section of the fifth nerve generally gives rise, and will also prevent the diminution of the temperature which takes place on the side of the head and face opposite to the section.

THE FUNCTION OF THE INTERCOSTAL MUSCLES.—In *The Medical Times and Gazette* for March 11, 1871, is an editorial

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notice of a lecture "*On Localized Electrization of Muscles*," by Dr. Duchenne, of Boulogne, delivered, by request, at St. Thomas's Hospital, London. Most anatomists are of the opinion that the external intercostal muscles are inspiratory muscles. The relative action of these muscles has always been a matter of controversy, some anatomists, as Haller, considering that the two muscles have a common action in the direction of the diagonal between them. Others consider the intercostals as depressors of the ribs. Cruveilhier thought that the intercostals were not essential agents in elevating or depressing the ribs, but considered that they rendered tense the intercostal spaces. Dr. Duchenne considers both internal and external intercostals to be inspiratory muscles. He exhibited photographs of cases of muscular atrophy bearing upon the subject, showing the result of loss of power in the intercostals in one case, and of atrophy of the diaphragm in another.

THE GLYCOGENIC FUNCTION OF THE LIVER.—Dr. James Tyson, in an introductory lecture on "The Glycogenic Function of the Liver," to the class of the Pennsylvania College of Dental Surgery (*Dental Times*, April, 1871), repeated the experiments usually performed in the demonstration of this subject. He showed the presence of sugar in the dead liver of dogs, *i.e.* in the liver of animals some time dead. He demonstrated, also, the absence of sugar in the blood going to the liver in the portal vein, and its presence in the blood passing from that organ in the hepatic vein. Finally, the absence of sugar from the liver as it exists in the living state was also shown.

From these facts he concluded that the original proposition of Bernard, that the liver is a sugar-forming organ during life, is correct, and accounted for the absence of sugar from the living organ, as demonstrated by Schiff, Pavy, Meissner, Jaeger, and McDonnell, by the fact proven by Prof. Austin Flint, Jr., that the sugar is washed away as fast as it is produced, by the blood of the hepatic vein.

Dr. Tyson also cited the recent experiments of Prof. W. T. Lusk, of New York City (*New York Medical Journal*, July, 1870), as further confirming this view. Dr. Lusk removed blood by catheterization from the right side of the heart and from the jugular vein, and, by titration with carefully diluted Fehling's copper solution, proved that the quantity of sugar in the former was from two to four times greater than that found under corresponding circumstances in the latter; whence he justly concluded that there was a by no means insignificant amount of sugar in the pure hepatic blood before it became largely diluted with the comparatively non-saccharine fluids of the venæ cavæ, and thence that the liver "is certainly, under normal conditions, the principal source of sugar in the economy."

ALBUMINURIC RETINITIS.—In the *Edinburgh Medical Journal*, January, 1871, Dr. D. Argyll Robertson directs attention to the combination of Bright's disease and organic changes in the retina. Dimness of vision, so frequently a concomitant of chronic Bright's disease, and which, until very recently, has been invariably ascribed to uræmic poisoning of the nervous system, is now, with few exceptions, attributed to organic disease of the retina, namely, fatty degeneration. In 1850, Türk noticed the coexistence of Bright's disease and fatty degeneration of the retina. Later (1856), Heymann, of Dresden, described "a peculiar variety of inflammation of the retina, followed by, or accompanied with, fatty degeneration of that structure, and associated with Bright's disease." Since then, the subject has been carefully studied by numerous observers, and the retinal lesion has been definitely determined.

"As regards the exact tissue of the retina in which the degeneration occurs, a considerable diversity of opinion has prevailed, but most have observed the change primarily affecting the outer and inner layer of granules, while Nagel and Schweigger also found the connective tissue of the retina, the fibres of Müller, similarly affected. In addition, a thickened sclerosed condition of the optic nerve fibres was noticed by some observers." The retinal affection is most frequently associated with the cirrhotic variety of Bright's disease.

ELEPHANTIASIS ARABUM.—Dr. Ingraham, of Kennedy, N. Y., reports with illustrations (*Buffalo Med. and Surg. Journal*, January, 1871, p. 225) an interesting case of this disease. A man thirty-two years of age, of healthy parentage, by occupation a lumberman, and thereby considerably exposed, had always enjoyed good health until 1858, when his left leg commenced to enlarge. Since then, excepting for a short period, it has gradually increased in size, until, at the present time, it has attained remarkable dimensions. The measurements of the limb at different points are fifty-nine, twenty-nine, thirty-six, and thirty inches; of the instep and foot, twenty-two and sixteen inches respectively. The nates and left half of the scrotum preserve their natural size. The cuticle of the upper part of the thigh is thickened, but is not scaly, nor is it of darker color than natural. From above downward, the skin gradually becomes harder, scaly, and of darker color than is normal, so that the skin of the foot very closely resembles that of the elephant. Prior to the enlargement of the limb the man weighed from 135 to 140 pounds; his weight is now from 280 to 300 pounds.

IDIOPATHIC TETANUS SUCCESSFULLY TREATED BY BROMIDE OF POTASSIUM AND CALABAR BEAN.—Mr. Allen Coutts gives in *The Practitioner* for April, 1871, the results of the treatment of a case of idiopathic tetanus by these two remedies. The amount of the extract of the physostigma venenosum was very small, only one-third of a grain every two hours, and Mr. Coutts is, therefore, disposed to attribute the fortunate result of the case to the administration, at the same time, of bromide of potassium, in consequence of its power to lessen the reflex excitability of the medulla oblongata and the nervous centres in general. Moreover, no depression was produced, which we have always to fear in administering large doses of calabar bean.

ON THE ACTION OF ACONITUM NAPELLUS.—In the same journal we find a paper on the action of this drug, by C. D. Phillips, M.D. According to this gentleman, aconite is always indicated in the early stage of simple inflammatory fevers, where as yet but little organic change has taken place, as in the early stage of pneumonia and most acute congestions. It is claimed for it that it not only lowers the frequency of the heart's action, but brings the temperature to its normal standard. After having done this, however, it is of no further use. In nine unselected cases of pneumonia the result of treatment was as follows:—"In none of them did the fever last longer than six days, and in five of them it left in about forty-eight hours, reckoning from the rigors; and in all these cases, in from three to six days after the temperature had fallen to 99°, or below it, the lungs became quite normal." Aconite will also be found useful in the treatment of tonsillitis, of simple cardiac hypertrophy without valvular disease, of puerperal fever, of erysipelas, of dysentery, and of dysenteric diarrhœa.

CROUP AND DIPHTHERIA.—In a communication in the February number of *Virchow's Archives*, Dr. Franz Hartman advocates the view that croup and diphtheria are not distinct diseases, but different grades of one and the same process. As is well known, modifications are impressed upon disease by the tissue or organ it affects and by its duration, and by keeping this in mind some of the points of difference presented by croup and diphtheria may be readily explained. In both conditions there is an exudative process, and the exudation must be furnished by the vessels,—the lymphatics as well as the blood-vessels. Dr. Hartman has demonstrated that the capillaries are not the terminations of the blood-vessels, but that the latter are united with small ducts which carry nutrition to the elements of the tissues. These little ducts, under ordinary circumstances, do not admit the blood-corpuscles, but may, when irritated, expand sufficiently to do so. The lymphatics do not extend to the epithelium of the mucous membranes, but terminate in follicles opening on the free surface and communicating with one another. The lymphatics are, moreover, connected with the blood-vessels by means of the vasa serosa, which are formed by the connective tissue corpuscles and their prolongations.

The anatomical construction of the mucous membrane allows, therefore, the exudation of plasma upon the outer surface, and this is prevented only by the fact that under normal conditions no more fluid is furnished by the capillaries than can be taken up by the lymphatics. Upon the occurrence of inflammation this ceases to be the case, for not only is there

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an increase in the amount brought, but the lymphatics are able to absorb less, in consequence of the compression which they suffer. We therefore have an exudation in every inflammation of the mucous membrane, but it will depend upon circumstances whether this appears upon the surface. The looser the texture of the mucous membrane affected, the more likely is the exudation to be retained in its interior. If the mucous membrane be adherent to muscles which are in constant action, the exudation will be forced to the surface by the contraction of these. A greater intensity of the inflammation will, however, paralyze the muscles, and there will, therefore, be under these circumstances a retention of the exudation within the membrane.

Croup, therefore, indicates the existence of inflammation not so severe as that which gives rise to diphtheria, and affects more frequently the larynx than the pharynx, because the mucous membrane of the latter is of much looser texture than that of the former. Diphtheritic patches are, on the other hand, most frequently found where the texture is loose, or where there is little movement, as, for instance, the tonsils or upper part of the pharynx. It is not uncommon to have diphtheria supervening upon croup: this is owing either to the violence of the inflammation paralyzing the muscles, or to the fact that the exudation which has coagulated upon the membrane prevents any further exudation. Dr. Hartman believes that the exudation which is retained within the membrane continues in a liquid condition, and solidifies only upon contact with the atmosphere.

The Formation of Pus.—In the same paper Dr. Hartman gives his views in regard to the formation of pus. The pus cell he believes to be identical with the white blood cell and with the lymph cell, and, like these, to be formed from the elements of the lymph and chyle. "I believe," he says, "that pus cells are only white blood or lymph cells, but that they do not come out of the circulation, but are developed where they are found, at the seat of the inflammation." Inflammation gives rise to an arrest of the circulation in the beginning of the lymphatics, in the vasa serosa, in the connective tissue cells, and even in the capillaries. This it is which gives rise to the inflammatory swelling. A development of lymph cells (pus cells) now takes place in the stagnating lymph contained in the lymphatics, and also in the connective tissue cells; finally the latter burst, and the fully-formed and immature pus cells are extravasated. This is the process of the formation of pus as it is observed in the connective tissue cells.

Case of Congenital Lymphatic Varix.—Dr. Robert Patterson reports in the May number of the *Edinburgh Medical Journal* a case of this rare disease. The part affected was the right leg. This limb was at least twice the size of the left one; had a slight purple tint all over, with here and there, on the most prominent parts, a bluish tinge. The whole limb from Poupart's ligament in front, and around by the crest of the ilium behind, down to the toes of the foot, was one mass of twisted and contorted varices. The general appearance which the limb exhibited may be likened to that of a very bad case of varicose veins of the leg in an adult, but the vermicular prominences rolled, as it were, round and round the leg in a singular manner. The child had perfect use of the limb, but did not move it much unless it was handled, which was evidently painful to it. The child lived only eight days, its death no doubt being hastened by an abundant transpiration of fluid from the limb, which continued during the whole of its life.

The autopsy showed that the varicose prominences were enlarged lymphatic vessels, filled to distention with a milky fluid.

Calabar Bean.—Mr. Albert E. Ebert touches the secret of the very common failure of the extract of calabar bean in practice when he states (*Pharmacist*, December, 1870) that the bean necessary for the production of an ounce costs $4.00, besides the alcohol for menstruum and the labor required,—and yet the commercial quotation of the extract is only $1.25 per ounce.

Keloid Tumors.—Dr. Tilbury Fox (*Lancet*, December 17, 1870) exhibited before the Pathological Society of London three specimens of these tumors, sent him by Dr. Anderson, of Jamaica, which had grown from the tubules of ears pierced for ear-rings. These outgrowths are common in Jamaica.

MISCELLANY.

Committee of Arrangements of the American Medical Association.—The committee appointed at the last meeting of the American Medical Association to make the necessary arrangements for its next meeting consists of Dr. E. Hartshorne, Chairman, Drs. S. W. Gross, D. Murray Cheston, F. F. Maury, James Tyson, S. W. Mitchell, John H. Packard, William Pepper, and R. M. Townsend, all of this city.

Meteorological.—The mean temperature of the month of May, as shown by the record kept at the Pennsylvania Hospital, was 66°.26, which is unusually high. The highest temperature observed during the month was 91°.5, on the 30th. The lowest was 48°, on the 8th. The average of the daily maximum temperature was 73°.83; that of the daily minimum temperature, 58°.69. According to the *Public Ledger*, the average of the mean temperature of the month of May since 1790 has been 62°.69. The highest mean temperature on record for May was 71°, in 1802, and again in 1826, the lowest being 51°.75, in 1848. On only three days during the past month did the thermometer fail to exceed the average mean temperature of the month.

The quantity of rain which fell during May was 3.383 inches, most of it (1.84 inches) occurring on the 5th. The mean rain-fall of the month for the past thirty-four years has been 4.45 inches.

A Family of Suicides.—At the inquest of the body of a man who committed suicide recently in St. Louis, the fact was developed that he had attempted to hang himself five months before, but was cut down by his wife, and that he was the last of a family of six brothers and sisters, all of whom had died by their own hands.

Appointments and Resignation.—Mr. Paget's numerous admirers in this country will be sorry to learn that he has felt himself obliged to resign his position at St. Bartholomew's Hospital, London, in consequence of debility left by his recent severe illness.

It is said that Mr. Callender will succeed to the vacancy thus created in the senior staff, and that Mr. Morrant Baker will be elected Assistant-Surgeon in that gentleman's place.

The Staff of Guy's Hospital has been recently increased by the appointment of Dr. Pavy as Physician. Dr. Pye-Smith was elected to fill the vacancy created by the promotion of Dr. Pavy.

Prof. Bamberger, of Würzburg, has been chosen as the successor of the late Prof. Oppolzer in the Professorship of Clinical Medicine in the University of Vienna, and it is said will assume the duties of the position early in the autumn.

Mortality from Smallpox in the Vaccinated.—A late number of the *British Medical Journal* contains some interesting statistics of the recent epidemic of smallpox in England. The mortality among vaccinated persons was so great that the confidence in the protective power of vaccination has been very much shaken. Dr. Seaton shows, however, that the mortality was decidedly greater among the unvaccinated. During the present epidemic, he says, the proportion of deaths to attacks among the vaccinated has mounted from below seven to fully nine per cent.; but the rate of deaths among the unvaccinated has mounted from thirty-five to forty-nine per cent. The difference between the death-rate of seven and of nine per cent. is due not to a

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falling off in the prophylactic power of vaccination, but to the greater intensity of the variolous influence.

NEW CURE FOR RHEUMATISM.—We take the following from the *New York Tribune:*

"We wonder how many infallible 'cures' there are for 'rheumatism,' just as we wonder how many diseases there are called 'rheumatism' because the doctors can think of no other name for them. The last treatment for this mysterious complaint is to give the patient a teaspoonful of salt and water, and then to place a pinch of salt in each of his stockings. As no medicine is good for anything which will not overthrow at least two entirely different diseases, we are happy to announce that the salt and water and the salt in the stockings have been found equally efficacious in cases of fever and ague. The general principle seems to be that if salt will cure meat it will cure anything; and it is about as sensible as a great many medical principles now in vogue."

THE MEDICAL PROFESSION OF PARIS DURING THE PRUSSIAN SIEGE.—A letter from Paris in the *Medical Times and Gazette* for April 22 gives an interesting account of the conduct of the medical profession during the recent siege of that city. On the days on which battles were fought, the whole *personnel* of the hospital was at work, performing the necessary operations. It was from exposure of this kind that M. Cocteau, a young and accomplished surgeon, contracted a pneumonia of which he died. All the hospital surgeons, without exception, had, in addition to their ordinary duties, three or four ambulances to attend to; and when the surgeons were absent, the services of the military hospitals also devolved upon them. Even the veterans—for many years retired from the hospitals—MM. Ricord, Blache, Briguet, Guérard, and others, wished to pay their tribute in these sad circumstances, and give proof of their zeal by placing themselves at the disposal of the ambulances. Dr. Ricord, president of the Ambulance de la Presse, though seventy years old, was present at every engagement, picking up and dressing the wounded under heavy fire.

CONDURANGO.—Some of our exchanges (*Nat. Med. Jour., Medical Gazette, Boston Medical and Surgical Journal*) refer to a recent correspondence between the Minister of the United States to the Republic of Ecuador and the government at Washington in regard to the introduction into this country for medicinal purposes of the wood of a tree called Condurango. It is said that fifty pounds of the wood have been placed at the disposal of the Surgeon-General of the navy for experiment by naval surgeons and other medical men, and it is the expressed wish of the Secretary of State that Mr. Robeson should cause it to be administered by the medical staff of the navy. The diseases in which the drug has been found to act most happily by the physicians of Ecuador are syphilis and cancer,—two diseases not generally thought to be closely allied. One of our contemporaries says:

"Unfortunately, the accounts of cures effected by this drug have been derived in great part from ignorant people, and the word cancer is so loosely used that it is impossible to believe in all the cases in which the patient was so fortunately restored to health under its use that he was affected with malignant disease."

SUED BY A CHINESE PHYSICIAN.—At San Francisco, L. J. Pahi, a Chinese physician, brought suit against a white man to recover the amount of his bill ($250) for professional attendance. The bill was paid before the case came into court, but it was Dr. Pahi's intention, in case the State court should have refused to receive his testimony, to apply to the United States court for a warrant, with a view to testing the right of the State courts to reject the testimony of the Chinese.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending May 27.	June 3.
Consumption	39	46
Other Diseases of Respiratory Organs	28	34
Diseases of Organs of Circulation	16	28
Diseases of Brain and Nervous System	42	50
Diseases of Abdominal Organs	19	24
Zymotic Diseases	21	41
Debility	18	23
Marasmus	8	14
Old Age	12	6
Cancer	7	4
Scrofula	2	2
Tetanus	0	1
Stillborn	9	15
Malformation	7	13
Intemperance	0	1
Casualties	5	2
Unclassifiable	9	10
Unknown	0	1
Totals	242	315
Adults	143	176
Minors	99	139

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 19, 1871, TO JUNE 4, 1871, INCLUSIVE.

COOPER, GEO. E., SURGEON AND MEDICAL DIRECTOR.—By S. O. 61, Headquarters Department of the Columbia, May 6, 1871, to inspect the affairs of the Medical Department and sanitary condition at Fort Hall, Idaho Territory, and, upon completion of this duty, rejoin his proper station.

CAMPBELL, JOHN, SURGEON.—By S. O. 109, Headquarters Department of Dakota, May 19, 1871, granted leave of absence for 30 days, with permission to apply for an extension of 40 days, to take effect when relieved by another medical officer.

GHISELIN, J. F., SURGEON.—By S. O. 112, Headquarters Department of the East, May 31, 1871, granted leave of absence for 30 days.

BILL, J. H., SURGEON.—By S. O. 61, C.S., Headquarters Department of the Columbia, to take charge of office of Medical Director and perform duties of Attending-Surgeon during Dr. Cooper's absence.

TOWN, F. L., SURGEON.—By S. O. 202, Headquarters of the Army, A. G. O., May 23, 1871, granted leave of absence for three months.

STERNBERG, G. M., ASSISTANT-SURGEON.—By S. O. 110, Headquarters Department of the East, May 26, 1871, assigned to temporary duty at Fort Adams, R.I., during absence of Assistant-Surgeon Waters, U.S.A., and, on return of Dr. Waters, to rejoin his proper station, Fort Hamilton, N.Y. Harbour.

HARTSUFF, A., ASSISTANT-SURGEON.—By par. 1, S. O. 49, Headquarters Department of the Lakes, May 20, 1871, assigned to duty as Attending-Surgeon and Examining-Surgeon of recruits at Detroit, Mich.; and by par. 2, same order, granted leave of absence for 30 days, with permission to apply for an extension of two months.

WOODHULL, ALFRED A., ASSISTANT-SURGEON.—By S. O. 36, Headquarters Military Division of the Missouri, May 22, 1871, granted an extension of his leave of absence for 30 days.

MCELDERRY, H., ASSISTANT-SURGEON.—By S. O. 100, Headquarters Department of Texas, May 20, 1871, relieved at Fort McIntosh, Texas, and to report in person to the Medical Director at San Antonio, Texas.

MACKIN, CHAS., ASSISTANT-SURGEON.—By S. O. 87, Headquarters Department of the Platte, May 22, 1871, assigned to duty with troops on the Republican River.

MEACHAM, FRANK, ASSISTANT-SURGEON.—By S. O. 92, Headquarters Department of the Platte, May 27, 1871, granted leave of absence for 30 days.

DE WITT, CALVIN, ASSISTANT-SURGEON.—By S. O. 22, Headquarters Department of Arizona, March 15, 1871, assigned to duty at Fort Whipple, Arizona Territory. (April 30, at Camp McDowell, A. T., awaiting transportation.)

GIRARD, JOS. B., ASSISTANT-SURGEON.—By S. O 202, War Department A.G.O., May 31, 1871, relieved from duty in the Department of the Platte, and granted leave of absence for four months, with permission to go beyond the sea.

WILSON, A. D., ASSISTANT-SURGEON.—By S. O. 90, Headquarters Department of the Platte, May 25, 1871, assigned to temporary duty at Camp Douglas, U. T.

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SATURDAY, JULY 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF PROGRESSIVE MUSCULAR SCLEROSIS (PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS OF DUCHENNE).

Delivered May, 1871,

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania; Attending Physician to the Philadelphia Hospital, and to the Children's Hospital.

YOU will remember, gentlemen, that at my last lecture, having fully discussed the symptomatology of Progressive Muscular Sclerosis, I had entered upon the discussion of its pathology and relation to some other affections. I told you that, in order to facilitate the study of this question, it was desirable to secure an examination of the tissue of the muscles involved, and that for this purpose I had obtained a small scrap of muscular tissue, by means of an "emporte-pièce," from both gastrocnemii and the left deltoid muscles. These have been subjected to careful microscopical study, with the following results:

The fragment removed from the left deltoid was of a slightly pale reddish color. When examined microscopically, a large majority of the fibrils showed distinct, though often fine and delicate, transverse striation. In a few instances, striation was entirely absent, the fibrils looking homogeneous and much like ground-glass cylinders. In a very few fibrils, also, distinct longitudinal striation was visible, and in others there was multiplication of the nuclei in the sarcolemma. In not a single fibril was there any trace of fatty degeneration. The fibrils varied in size from $\frac{1}{465}''$ to $\frac{1}{250}''$, or even, in a few cases, $\frac{1}{160}''$. The striation was particularly faint, or at times even absent, in the largest fibrils. There was a large amount of interstitial white fibrous tissue, with abundant granular matter containing many oval nuclei. In places there were small collections of minute fat-globules or refracting granules.

The fragments removed from the gastrocnemii presented closely analogous conditions. The muscular tissue was merely rather paler red than normal. The muscular fibrils varied greatly in appearance and in size. The transverse striation was in some fibrils perfectly healthy, but in a majority it was altered, though in various ways. Thus, in some it was very faint and difficult to distinguish; in others, it was wholly absent, the fibrils presenting the appearance of fine ground glass. In other fibrils there was a marked appearance of longitudinal striation, due to delicate fibres or very fine fusiform cells arranged in the long axis of the muscular fibril. In many fibrils there was distinct excess of the nuclei of the sarcolemma, which appeared as large oval nuclei with a punctiform nucleus. A few fibrils presented streaks of minute fatty granules along their centres, and a very small number were decidedly fatty. The muscular fibrils varied greatly in size also. Many were about $\frac{1}{250}''$ to $\frac{1}{350}''$ in diameter; but a number were $\frac{1}{450}''$ to $\frac{1}{400}''$, while others were as much as $\frac{1}{125}''$, $\frac{1}{150}''$, $\frac{1}{200}''$ in width. There was a large excess of interstitial tissue, in places taking the form of long, narrow, wavy bands of pure white fibrous tissue; in others, appearing as abundant granular stroma, thickly strewn with oval nuclei. There was also some curly, elastic fibrous tissue. There was a considerable amount of interstitial fat, existing as scattered globules, or arranged in patches of large, closely aggregated fat-globules. In places isolated muscular fibrils lay imbedded in this fibroid tissue so as to be scarcely visible; but in other places a number of fibrils lay directly in contact with each other, forming a little bundle, around which the excessive growth of interstitial tissue had occurred. The arterioles and capillaries appeared healthy. No nerve-fibrils were detected.

Similar examinations have, as before stated, been made in a number of cases of this disease, and have yielded results agreeing in all essentials with those I have found in the muscles of this patient. The points which I desire to dwell upon as of capital importance in their bearing on the pathology of the disease are, in the first place, that the primary fundamental change in the affected muscles is an excessive growth or hyperplasia of the interstitial connective tissue. This is found to have taken place even in those muscles which have not undergone any increase in bulk, or which are even reduced in size (for instance, the left deltoid in this case). In the latter case it is evident that the process cannot have advanced far, and it also appears probable that there is a certain amount of simple atrophy of the muscular fibrils developed simultaneously. This, however, does not appear to be the only change in the muscular fibrils, which are also found to begin to lose their transverse striation, and to present increase in the nuclei of their sarcolemma, or distinct longitudinal striation. Observe, however, that there is not the slightest tendency to a primary fatty degeneration of the muscular fibril. It may happen that this interstitial growth never reaches such an extent as to cause apparent enlargement of the muscle, so that only certain muscles may thus enlarge. Thus, as a rule, the muscles of the calves are the first to undergo this subsequent change, and they may be the only ones in which it appears, although numerous other muscles may present the first stage of the process.

In those muscles which do undergo this subsequent enlargement, the hyperplasia of interstitial connective tissue is found to have reached an extreme degree. The appearances presented indicate that the entire process has been one of sclerosis, in which there has been rapid growth of nucleated fibro-cellular tissue, with the development of bands of wavy fibrous tissue, and even some curly elastic fibres. It is easy to recognize, therefore, the identity of this process with the other sclerotic inflammations, as of the connective tissue of the nervous centres (sclerosis of brain and spinal cord), of the lungs, liver, and kidney (cirrhosis), and of the subcutaneous tissue (scleroderma). There is, however, one point in which this affection of the muscles appears to differ from the other sclerotic conditions mentioned. In the latter, we constantly observe that, with the progress of the change, a tendency to organization and contraction of the newly-formed fibrous tissue soon manifests itself, while the essential elements of the part (nerve-tubules, liver-cells, or uriniferous tubules) are compressed and undergo atrophic degeneration. In the disease we are now considering however, there is a simultaneous change in the muscular fibrils, even in the early stage; but this does not appear to depend wholly on the hypertrophy of the interstitial connective tissue, nor does it maintain any definite or constant relation with this latter change throughout the course of the disease.* Indeed, as is seen in this patient, those very muscles which present the greatest degree of sclerotic enlargement may be the strongest of the whole series which are implicated in the disease. It is true that the muscular fibrils of such muscles present a further stage of the change begun in the first period of the disease. Their transverse striation is still more delicate and faint, or is even, in a number of fibrils, entirely lost. But they do not seem to have undergone any further

* It may be that in some cases where there is marked loss of power, with general preservation of the size and striation of the muscular fibrils, the sclerotic change in the connective tissue compresses the branches of the motor nerves as they traverse the muscular tissue.

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atrophy; indeed, the measurements I have made, and the increased strength in the muscles of the patient's calves, would point to the belief that the muscular fibrils may temporarily share the exaggerated nutrition of the surrounding connective tissue, and undergo a delusive increase in size and power.* Thus, I find that the fibrils in the gastrocnemii muscles of this patient are fully one-third wider than those in his left deltoid, and that some of the former have acquired the enormous size of $\frac{1}{115}''$ in transverse diameter.

Whether this transitory stage usually exists or not, the sclerotic change does not depart from its inevitable law of development. Already in this second stage we have seen patches of fat-globules appearing in the interfibrillar spaces, and as the disease passes into the final stage, this fatty degeneration of the muscle advances with varying rapidity, even leading in some cases to such an accumulation of fat as to be visible to the unaided eye as yellowish streaks. This extreme condition is, however, very rare, and much more frequently the accumulation of fat is moderate. Even when very great, however, it is found to be far more due to increase of the interstitial fat than to a true fatty degeneration of the muscular fibrils. Their nutrition must be, however, very gravely impaired, so that they undergo atrophy, and in many places entirely disappear, leaving their sheaths empty. This change coincides with the rapid extension of paralysis which characterizes the final stage of the disease.

This detailed account of the muscular lesion naturally leads to the question of the pathology of this curious affection. It cannot be held that the disease depends upon or is essentially connected with any cerebral lesion. It is true that in a number of cases the patients have been idiotic, or at least exhibited marked impairment in intellectual development: in the present case, also, epileptic convulsions are present as a complication. It must, however, be remembered that cerebral disturbances of any kind whatsoever are not uniformly present, that disorders of special sense are rare, and that some cases of the disease have been observed associated with a normal state of the intellectual faculties; and, finally, that in the one case where the nervous centres have been examined, the brain was found healthy. The peculiar character of the muscular lesion and its symmetrical distribution are additional proof, if more were wanting, of the absence of all connection between the disease we are discussing and any cerebral lesion.

Nor is the argument more strong in favor of a spinal lesion as the cause of this affection. It is true that the first idea which will arise, on learning from a patient that his malady began with gradual loss of power of both legs, is that there is some disease of the anterior columns of the spinal cord. When, however, as in the present case, we further find that there has been no alteration of sensibility, no loss of co-ordination of muscular movements, no subjective sensations, such as of formication or of constriction, no implication of either bladder or rectum; when also we learn on careful examination that the loss of power was not in reality the primary symptom, but was preceded by and existed only in proportion to certain muscular changes,—we must conclude that the disease is not dependent upon any affection of the spinal cord. The most important fact to be clearly apprehended here is that in reality there is no paraplegia, in the strict and only correct significance of the word, present in the disease we are studying. It is of course true that a paralyzed muscle will often undergo atrophy or fatty degeneration, but these changes are then dependent upon loss of function and of innervation, and are essentially secondary to the interruption of the transmission of motor power. Widely different, however, is the relation which here exists between the loss of power and the alterations in the muscles. There is throughout the course of the disease no real loss of motor nerve-power, nor any interference with its transmission, but merely an interference with its manifestation, owing to a progressive sclerotic change in certain muscles. This change has been slowly advancing for some time before the loss of power is so marked as to attract the notice of the patient; and just in proportion as it progresses, do the muscles become more and more weak, until, when the final stage of the sclerosis is attained, their contractile power is so completely lost that the patient is bedridden and almost motionless. It is on account of the radical difference between this process and any form of paraplegia that I object to the name "pseudo-hypertrophic paralysis," applied by Duchenne to this disease, and greatly prefer "progressive muscular sclerosis," as expressing accurately the pathological condition present.

Having, then, excluded the possibility of either a cerebral or spinal origin for this disease, I can only offer the somewhat unsatisfactory view of its pathology, that it consists essentially in a perverted nutrition of the muscles affected, probably dependent upon a lesion of the branches of the sympathetic nerve which are distributed to the tissues involved. This opinion that the sympathetic nerve is primarily affected, does not, it is true, rest on any positive or convincing evidence. In a certain number of cases, however, especially in those observed in Germany, there have been symptoms noticed, such as reddish or bluish discoloration of the skin of the affected parts and variations in their temperature, which would certainly indicate some marked disturbance in the vaso-motor supply of the cutaneous vessels, and have accordingly led many of the observers of this disease to adopt this view of its pathology. It must be confessed, however, that such symptoms are not constant, or at least are not present at all stages of every case: thus, in the present instance, the most careful examination fails to determine them. Still, for the present, in default of any exact knowledge or of any more satisfactory explanation, this view of the pathology of progressive muscular sclerosis may be accepted.

I may add that no additional light is to be derived from a study of its causes. It is eminently a disease of infancy and childhood, making its appearance, in the vast majority of cases, between the ages of five and thirteen years. It has, however, been observed to begin in one case at the age of fourteen years; in the present case it was first noticed at the age of fifteen years; and in two cases observed by Benedikt (loc. cit.), and in one by Laycock (loc. cit.), the disease seems to have originated in adult life. The disease is much more common in the male than in the female sex; and, finally, it frequently affords evidence of a hereditary tendency, two or even four cases having been more than once observed in a single family. It usually appears spontaneously, not appearing to depend upon any particular external causes. In single instances it has been attributed to such causes as the influence of cold and damp, or an attack of some eruptive fever. In my own case, the cause assigned by the patient—protracted over-exertion in doing work too heavy for his years—is far more likely to have really influenced the development of the disease. It must be conceded, however, that in its etiology, as well as in its pathology, this curious affection still presents an unsolved problem.

Let me now invite your attention to the relation which this disease bears to other affections. I shall not occupy your time by any lengthy discussion of the diagnosis between progressive sclerosis of the muscles and atrophic infantile paralysis. The suddenness of attack in this latter affection, frequently associated with fever

* This enlargement of the size of the fibrils of the gastrocnemii has also been observed by Leyden (loc. cit.).

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or with some cerebral disturbance, as convulsions, the occurrence of complete and more or less extensive paralysis, the gradual disappearance of the paralysis in some parts, while in others it remains permanent, the diminution and ultimate loss of electro-muscular contractility, the occurrence at a later period of fatty degeneration and atrophy of the affected muscles, with arrest in the development of the bones and marked deformities, and the entire absence of any secondary enlargement of the parts involved, constitute a series of distinctive features so clear and decisive as to render the differential diagnosis easy and certain.

A disease from which it is much more important to carefully distinguish progressive sclerosis of the muscles is progressive muscular atrophy occurring in childhood. The especial importance of the relations of these two diseases depends on the fact that both are alike diseases of nutrition of the muscles, thus constituting a group quite distinct from all the forms of true paralysis. In both the disease begins—usually without any apparent cause—insidiously, and progresses slowly but surely. In both the loss of motor power is secondary to the changes in the muscular tissue; in both the muscular degeneration and consequent loss of power almost invariably progress steadily to a fatal result. In progressive muscular sclerosis the positive anatomical proof is still wanting, but analogy, theory, and some special symptoms lead us to believe in the existence of a lesion of the sympathetic nerve system. In progressive muscular atrophy, careful post-mortem examination has repeatedly demonstrated the actual presence of such a lesion. These two diseases, then, stand related to each other as being alike caused by disturbance of the trophic nervous system, but they are at the same time most positively separated from each other by marked differences in their course and symptoms.

Thus, in progressive muscular atrophy, the disease nearly always begins in the upper extremities, and invades subsequently the trunk and lower extremities. Indeed, Duchenne has pointed out that when this disease appears in childhood, which is quite rare, it begins in the face, where it produces atrophy of the orbicularis oris and the zygomatici, and does not extend to the trunk and extremities until after a period varying from two to three years. It then follows the same descending course seen in cases occurring in adults. The atrophy usually affects the muscles irregularly, so that various deformities and vicious positions of the parts involved are developed. Microscopic examination shows a progressive fatty degeneration and atrophy of the muscular fibrils, and in proportion as this increases there is loss of power and of electro-muscular contractility. One further symptom of high diagnostic value is the frequent occurrence of fibrillar contractions in the affected muscles. Finally, the muscles which have progressively atrophied never undergo any secondary enlargement, nor does microscopic examination reveal any lesion of the interfibrillar connective tissue. In all of these particulars, then, progressive muscular atrophy differs widely from progressive muscular sclerosis, which is almost exclusively a disease of childhood, beginning in the muscles of the lower extremities and advancing upwards, producing a peculiar mode of standing and walking, and in which the affected muscles, with or without a stage of atrophy, undergo remarkable enlargement, without fibrillar contractions, and with preservation of electro-muscular contractility till a comparatively late period of the disease. Microscopic examination also shows, even in the early stages of the disease, a marked hypertrophy of the interstitial connective tissue in the affected muscles, together with peculiar changes of the muscular fibrils, not at all resembling fatty degeneration; while later, this sclerotic process terminates in fatty degeneration of the interstitial tissue, and increasing degeneration and atrophy of the muscular fibrils. There is also a want of constant relation between the degrees of sclerosis, of the changes in the muscular fibrils, and of the impairment in muscular power. This hasty summary of the main distinctions between these two affections will show how readily a differential diagnosis can be established.

In regard to the prognosis of progressive muscular sclerosis, the disease may be pronounced incurable, unless treatment is instituted during the earlier stages, before the affected muscles have become markedly enlarged. Even when, however, it has progressed to an advanced stage in certain muscles, its progress in other portions of the body may probably be arrested. The duration of the disease is rarely less than six years, and may extend to upwards of fifteen or twenty. Thus, in the present case, the disease has been in positive existence for five years, and yet has only passed into the second stage, and would probably, even were no treatment adopted, require several more years to run its course. When a fatal result is produced, it is either by the extreme prostration and lowered vitality of the patient, by weakening of the respiratory muscles, favoring pulmonary engorgement, or by some intercurrent disease.

Fortunately, however, it may be safely asserted that treatment, when instituted early and faithfully pursued, exercises a powerful control over the progress of the disease. Unless there are special concomitant symptoms, such as anæmia, epileptiform convulsions, digestive derangement, or the like, there is no clear indication for internal medication, nor has the use of any drugs been followed by decided benefit. Those which may be given most rationally, as tending to modify the nutrition of the nervous system, are the alterative nerve tonics, of which I should be disposed to especially recommend the nitrate of silver. Of course, in addition, care must be taken to improve the state of the blood, if it be anæmic, and to correct any disturbance of digestion. If the case is complicated with epileptiform convulsions, as in my patient, a course of bromide of potassium may be directed with advantage, The remedy, however, from which most good is to be expected, is electricity. This has been used with very great benefit, in the form of faradization by Duchenne, and in that of galvanization by Benedikt and others. I have pointed out to you that the electro-muscular contractility is usually preserved until late in the disease, though very different results are obtained in some cases by the use of the different varieties of current,—the muscles sometimes contracting most powerfully under the application of a faradaic, and at others under that of a galvanic, current. I should recommend the employment of whichever form is found to secure the most active muscular contractions. If the faradaic current be used, it should be applied directly to the affected muscles, or one electrode may be applied over the motor point of the muscle (*i. e.* over the trunk of the motor nerve before it enters the muscle) and the other over its body. If the galvanic current be indicated, one electrode (the copper pole) should be applied over the carotid fossæ, along the anterior border of the sterno-cleido-mastoid muscles, since in this region the cervical portion of the sympathetic nerve is most readily accessible; and the other electrode (the zinc pole) may be applied along the lumbar spine, or over the motor point of the affected muscles. In some cases it may also be advantageous to combine the galvanization of the cervical sympathetic with faradization of the affected muscles. In the present case, I have directed the muscles to be thoroughly faradized every other day. I have told you that the muscles responded quite actively to the stimulus of this current; and already there is a positive improvement in the power of his legs and in

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his ability to walk. I am therefore encouraged to persevere in this treatment, in the hope that by its prolonged use the progress of the disease may be ultimately arrested.

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This disease was first recognized and described as a distinct affection by Duchenne in 1861, although some few unrecognized cases had been put on record before that date. Since that time there have been forty-eight cases, including the present one, published. This does not include four cases referred to as published by Meryon (loc. cit.), but which are somewhat doubtful, though two at least appear to have been genuine instances of this disease. The total number of cases may therefore be estimated at about fifty.

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THE BROMIDES IN THE TREATMENT OF THE SUMMER-COMPLAINTS OF CHILDREN.—Dr. F. G. Williams (*Chicago Medical Examiner*, June, 1871) has had great success in the treatment of these affections with the bromide of potassium, given in from one-half- to two-grain doses, and repeated every one, two, or three hours, according to the age of the patient and the symptoms presented by him. The bromide may be given dissolved in a little syrup of rhubarb, to which a small quantity of sulphate of morphia may be added in cases in which there is much pain or restlessness.

ORIGINAL COMMUNICATIONS.

PHYSIOLOGICAL ACTION OF CONGRESS WATER.

BY ISAAC OTT, M.D.,

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CONSIDERING the extensive use in all ages, and the undoubted utility, of mineral waters, it is surprising that so very few zoochemical analyses of the excretions as affected by them have been made. In Germany, Mosler, Beneke, and others have made several elaborate investigations, but I am not aware of any similar work in this country.

In the following experiments, the hour of rising was 7½ A.M., that of retiring 9 P.M.; giving thirteen and a half hours for work, and ten and a half for sleep. Of the working-hours, I devoted eight to exercise—similar as possible—and five to study. I breakfasted at 8 AM., dined at 12 M., and supped at 5½ P.M. At breakfast I ate forty grammes of bread, fifteen grammes of butter, ninety-six grammes of eggs, and one gramme of salt; at dinner, eighty grammes of bread, thirty grammes of butter, one hundred grammes of beef, and one hundred and seven grammes of apples; at supper, forty grammes of bread, fifteen grammes of butter, and of beef and apples each a hundred grammes. At each meal I also ingested two hundred cubic centimetres of water. The weight of the body was taken an hour after each meal, and the mean of these three weights was taken as the daily weight. The phosphoric acid of the *alkalies* was obtained by precipitating the *earthy* phosphates in fifty cubic centimetres of urine with a few drops of ammonia, filtering, and collecting the filtrate with the ammoniacal washings of the residue, then treating the filtrate with acetic acid till it was neutral, and analyzing by volumetric solution of acetate of uranium. Having previously ascertained the whole amount of phosphoric acid in fifty cubic centimetres, I obtained that of the earths by simple deduction of that of the alkalies. In the other analyses I employed the same means as detailed in No. 4 of *The Medical Times*. The amount of free acid is indicated in grammes of oxalic acid. Observing the preceding conditions, at an average temperature of 36° F., I made the observations noted in the following table, in which everything is expressed in grammes, except the quantity of urine, which is in cubic centimetres:

Weight of Body.		Fæces	Urine. Quantity.	Urea.	Chlor. of Sodium.	Sulphuric Acid.	Phosph. Acid of Alkalies.	Phosph. Acid of Earths.	Free Acid.
54260	1st day.	30	767	30.06	8.13	2.00	1.303	.284	1.35
53817	2d "	61	708	29.73	5.73	2.04	1.805	.297	2.11
53799	3d "	68	795	30.85	9.54	2.12	1.650	.272	2.65
53474	4th "	15	860	31.30	8.08	2.35	1.685	.379	2.09
53297	5th "	34	795	32.51	5.64	2.29	1.566	.294	2.24
Average		41.6	785	30.89	7.42	2.16	1.601	.305	2.08

The above table shows the mean quantity of fæces, urine, urea, chloride of sodium, sulphuric acid, phosphoric acid of earths and alkalies, and free acid, for five days when in good health.

On the day subsequent to these experiments I imbibed three hundred cubic centimetres of recently-bottled Congress water—temperature 50° F.—half an hour before breakfast. I did so for the next three days, but on the following two days took four hundred cubic centimetres. The mean temperature was 29° F. The table

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appended shows the results, all the preceding circumstances being observed:

Weight of Body.		Fæces	Urine. Quantity	Urea.	Chlor. of Sodium.	Sulphuric Acid.	Phosph. Acid of Alkalies.	Phosph. Acid of Earths.	Free Acid.
53319	1st day.	40	959	34.42	8.53	2.49	1.409	.363	3 16
53299	2d "	27	908	33.59	10.62	2.51	1.334	.481	2.81
53329	3d "	117	854	31.93	7.00	2.37	1.246	.427	2.15
53436	4th "	50	843	33.46	8.00	2.40	1.205	.551	2.63
53582	5th "	64	951	34.83	10.55	2.24	1.255	.418	2.27
Average		59.6	903	33.64	8.94	2.40	1.289	.448	2.60

By comparing the above tables, we see that the body, during the normal days, lost weight, while on Congress-water days it gained weight. To explain the cause of increase of weight, I made a second series of experiments.

During this series I arose at 5¾ A.M., and retired at 10½ P.M. The amount of food was not limited. For the three days, giving the normal value of excretions, I ate daily on an average for breakfast, at 7½ A.M., ninety-six grammes of eggs, twenty-six grammes of butter, fifty-eight grammes of bread, with four hundred cubic centimetres of coffee; for dinner, at 12 M., thirty-eight grammes of bread, one hundred and five grammes of beef, eighteen grammes of butter, one hundred and thirty-eight grammes of apples, with six hundred cubic centimetres of water; for supper, at 6¼ P.M., forty-eight grammes of bread, seventeen grammes of butter, thirty-five grammes of dried beef, eighty-seven grammes of cakes, with four hundred cubic centimetres of coffee; and at 8¾ P.M., two hundred cubic centimetres of water. The fractional parts of grammes are omitted in the ingesta of both series. During the three days when Congress water was taken, I took an average daily amount, for breakfast, of ninety-six grammes of eggs, twenty-nine grammes of butter, fifty-eight grammes of bread, and four hundred cubic centimetres of coffee; for dinner, thirty-eight grammes of bread, one hundred and twenty-six grammes of beef, eighteen grammes of butter, one hundred and forty-one grammes of apples, with six hundred cubic centimetres of water; for supper, forty-eight grammes of bread, seventeen grammes of butter, eighty-seven grammes of cakes, thirty-five grammes of dried beef, with four hundred cubic centimetres of coffee; and two hundred cubic centimetres of water at 8¾ P.M. The fluid at meals was the same in quantity each day during both normal and Congress-water days. Four hundred cubic centimetres of Congress water—temperature 50° F.—were taken half an hour before breakfast. Between 8 A.M. and 10 A.M., 1 P.M. and 2 P.M., 4 P.M. and 6 P.M., 7 P.M. and 8 P.M., we walked about a quarter of a mile. The other hours were devoted to study and work, as similar as possible.

The body-weight was taken with a balance that, when loaded with two hundred and fifty pounds, will turn with a fiftieth of a pound. By the term "insensible perspiration" I mean the conjoint excretion of the skin and lungs. It was estimated by weighing ingesta, excreta, and body. To find the solids of the urine, I used Trapp's formula. The specific gravity was taken by the specific-gravity bottle: no thermometric corrections. To find the solids for fractional parts of the day, I took the specific gravity of the whole of the urine of that period.

The uric acid was determined by precipitating with hydrochloric acid and weighing on a dried filter. Two hundred cubic centimetres of urine were used for it. In my calculations I made one cubic centimetre of the fluids ingested equal one gramme.

During the normal days I ingested, as a daily average, 1600 c.c. of fluids and 668.3 grammes of solids, = 2268.3 grammes.

The body lost in weight a daily average of 157.2 grammes.

The daily mean excretion during the normal days was 2425.5 grammes.

During Congress-water days I ingested, on an average, daily, 2000 c.c. of fluids and 695.1 grammes of solids, = 2695.1 grammes.

The mean daily loss of body-weight was 66.5 grammes.

The average daily excretion on Congress-water days was 2761.6 grammes.

Thus the daily excess of excreta on Congress-water days over those on normal days was 336.1 grammes.

The daily excess of ingesta on Congress-water days over those on normal days was 400 c.c. of water and 26.8 grammes of solids, a total of 426.8 grammes.

Thus 90.7 grammes of the daily ingesta of the Congress-water days were retained in the body: hence the body would have a *relative increase of weight from the use of* 400 *c.c. of Congress water.*

We will now consider the relations between the body-weights in connection with ingesta and egesta. We take the *normal* days. During the hours from 6 A.M. to 12 M. the body-weight decreased, on an average, 166.3 grammes. During the hours from 12 M. to 6 P.M. the mean increase of body-weight was 30.3 grammes. (Difference from 6 A.M. weight, —136 grammes.) During the hours from 6 P.M. to 6 A.M. the body had a mean decrease in weight of 21.2 grammes. (Difference from 6 A.M. weight, —157.2 grammes.)

Now, taking the *Congress-water* days, we find that during the hours from 6 A.M. to 12 M. the mean body-weight decrease is 40.6 grammes. In this period 400 c.c. of water and 3.3 grammes more of solids were ingested than in the same period of normal days.

Supposing the nutritional changes of the body to act in this period with the same intensity as on the normal days, we should have an increase of body-weight of 237.0 grammes. Such increment we find is not the case. But we perceive that 277.5 grammes more are excreted than on the corresponding period of normal days. Hence the ingestion of 400 *c.c. of Congress water in early morning increases considerably the body-excretion of morning hours.*

From 12 M. to 6 P.M. the mean body-weight increase was 55.7 grammes. (Difference from 6 A.M. weight, +15.1 grammes.)

Comparing the increase of weight on Congress-water days from 12 M. to 6 P.M., with that on the corresponding period of normal days, we have a plus difference of 25.4 grammes. The ingesta of this period exceeded those of the corresponding period of normal days by 23.5 grammes, while the excreta were less by 1.9 grammes.

The difference of each period from its morning weight shows that the body, instead of losing, as on normal days, by 6 P.M. 136 grammes, gained on Congress-water days 15.1 grammes. The diminished temperature will not account for this diminished excretion. Hence we infer that the 400 *c.c. of Congress water taken in early morning causes* no increase of excretion, but rather *a decrease in the afternoon hours.*

From 6 P.M. to 6 A.M. the body lost weight, on an average, 81.6 grammes. (Difference from 6 A.M. weight, —66.5 grammes.)

The amount of ingesta less than that of the same period of normal days was .06 grammes, while the excess of egesta was 60.3. Now, this loss of weight is greater than that of the same period of normal days. Hence we conclude that the 400 *c.c. of Congress water taken in early morning also causes an increased excretion in*

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the night hours, though the increased excretion is not so great as that of the morning hours.

In the following table, the whole excretion of the body for the three normal days and for the three Congress-water-days, as well as the fractional parts of those days, is given. The variation for the whole period, together with the fractional variations for the fractional periods, is also exhibited, and explains the body-weight fluctuations.

NORMAL DAYS.

6 A.M.—12 M.	12 M.—6 P.M.	6 P.M.—6 A.M.	Total.
2238.9 grammes.	2611.1 grammes.	2426.7 grammes.	7276.7 grammes.

CONGRESS-WATER DAYS.

3071.6 grammes.	2605.5 grammes.	2607.7 grammes.	8284.8 grammes.
+832.7 "	—5.6 "	+181.0 "	+1008.1 "

Hence we again conclude that the *ingestion* of 400 *c.c. of Congress water* at 7 A.M., half an hour before breakfast, *causes an increase of the excretions of the body in the morning and night hours, but a decrease of them in the afternoon hours.*

The following table shows how, under the ingestion of Congress water, the greater excretion takes place for entire days:

NORMAL DAYS.

Insensible Perspirat.	Renal Excret.	Intestinal Excret.	Total.
3410.0 grammes.	3448.7 grammes.	418 grammes.	7276.7 grammes.

CONGRESS-WATER DAYS.

3324.0 grammes.	4575.8 grammes.	385 grammes.	8284.8 grammes.
—86.0 "	+1127.1 "	—33 "	+1008.1 "

The urinary excretion is increased, while the insensible perspiration and intestinal excretion are diminished. The decrease of insensible perspiration by eighty-six grammes is probably due to a lower temperature, as is also part of the increased renal excretion; but the major part of the diuretic effect is due to the Congress water. The decrease of intestinal excretion in this series is thirty-three grammes, but we believe there would have been an increase had the experiments continued over five days, as in the first series the increase was eighteen grammes. In the next table we see in what direction for separate parts of the day the increased excretion takes place, and also at what time the Congress water leaves the body:

6 A.M.—12 M.			12 M.—6 P.M.			6 P.M.—6 A.M.		
Insensible Perspiration.	Renal Excretion.	Intestinal Excretion.	Insensible Perspiration.	Renal Excretion.	Intestinal Excretion.	Insensible Perspiration.	Renal Excretion.	Intestinal Excretion.
287.2 grms.	330.3 grms.	128.6 grms.	401.0 grms.	458.7 grms.	10.6 grms.	448.4 grms.	360.4 grms.	0
CONGRESS-WATER DAYS.								
339.4 grms.	614.4 grms.	70 grms.	336.0 grms.	484.8 grms.	47.6 grms.	432.5 grms.	426.0 grms.	10.6 grms.
+52.2 "	+284.1 "	—58.6 "	—65.0 "	+26.1 "	+37 "	—15.9 "	+65.6 "	+10.6 "

The decrements indicated in the table of insensible perspiration and intestinal excretion are probably not the real results of the action of Congress water, the causes having been already mentioned. On inspection of the table, we see that the insensible perspiration and renal excretion of the morning hours are increased, while the intestinal excretion is diminished; that in the afternoon the insensible perspiration is diminished, while the intestinal and renal excreta are increased; and that in the night the same relation is preserved. From the above we conclude that the ingestion of 400 c.c. of Congress water increases in the morning hours the insensible perspiration and renal excretion, and that the latter is also increased in the afternoon and night hours; also, that the Congress water leaves the body at the same periods at which these excretions are increased,—that is, in greatest quantities in morning hours, next in night hours, and the least in afternoon hours; further, that the diminution of excretion in the afternoon hours seems compensatory of the increment in morning hours.

From the above the following table is constructed. We estimate that the insensible perspiration on normal days contains seventy-five per cent. of water,—on Congress-water days the same; and that the intestinal excretion normally and on Congress-water days has seventy per cent. The urinary water is determined by subtracting the known amount of solids from the whole urine. For the solids ingested in morning and evening we allow 40 per cent. of water, and for those of midday 88 per cent.

WATER INGESTED.			WATER EXCRETED.		
6 A.M.—12 M.	12 M.—6 P.M.	6 P.M.—6 A.M.	6 A.M.—12 M.	12 M.—6 P.M.	6 P.M.—6 A.M.
472.0 grms.	864.5 grms.	675.0 grms.	625.4 grms.	755.1 grms.	678.5 grms.
CONGRESS-WATER DAYS.					
873.3 grms.	885.2 grms.	675.0 grms.	905.5 grms.	757.6 grms.	737.4 grms.

APPROXIMATIVE AMOUNT OF WATER IN BODY.

NORMAL DAYS.

12 M.	6 P.M.	6 A.M.
—153.4	—44.0	—47.5

CONGRESS-WATER DAYS.

—32.2	+95.4	+33.0

The table shows that there is more water in the organism on Congress-water days than on normal days; also, that on Congress-water days we have the greatest quantity of water in the system at 6 P.M.

On examining the daily loss of weight,—66.5 grammes during corresponding days,—we have the greatest part of it at night, the next amount in the morning, and none at all in the afternoon. Now, the urinary solids are increased, but the solids of the diminished insensible perspiration and intestinal excretion will not account, except in small part, for the relative increase of weight, —90.7 grammes. Now, as the daily increase of the water of the economy on Congress-water days is 80.5 grammes, we conclude that the relative increase in weight is due to retention of water, or, in other words, that the body is more nearly saturated with water. We believe this to be the cause of increase of weight in the first series of experiments on Congress-water days.

We will now examine the changes of the urinary constituents in the first series of experiments. The daily increase of urea was 2.8 grammes. The uric acid in the second series of experiments was possibly lessened. The sulphuric acid was increased daily .24 grammes, and the increase is nearly parallel with that of urea. The phosphoric acid was little altered, taking into consideration the insufficiency of food. More of the phosphoric acid, however, was united to earths than on normal days, due probably to the magnesia and lime of Congress water. The free acid was increased, contrary to expectation. Carbonic acid, appearing in urine as a carbonate, and the carbonates of the Congress water, would certainly be supposed to diminish the acidity. The chloride of sodium was increased. This increase is due both to the action of the water and its

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chloride of sodium. The Congress water did not deprive the body of any of its own chloride of sodium. As to this action on the tissues by Congress water, we believe it to be due in major part to the saline elements. Assuredly the water and its temperature (50° F.) had little to do with the nitrogenous increase, if previous observations are reliable. As to which one of the saline elements is the principal cause, we can give no answer till the effect of each one on the organism has been determined. Past experiments seem to show that chloride of sodium has little effect.

	Urinary Solids.	
6 A.M.—12 M.	12 M.—6 P.M.	6 P.M.—6 A.M.
10.3 grms.	11.7 grms.	18.2 grms.
	Congress-Water Days.	
12.4 grms.	12.5 grms.	20.3 grms.

On examination of the increase of solids on separate periods of Congress-water days, we find the increase of morning and night hours about equal. It is probable that the increments of morning and night are about equally made up of an increase in the quantity of urea and of chloride of sodium; also, that the afternoon increase is mainly composed of urea, as the retained water would probably also contain some of its chloride of sodium. Besides, when chloride of sodium is taken with a meal, a portion of it emerges within six hours, and another portion is retained for some time, and then appears in the urine.

In the following table, representing the hourly alterations of urinary solids for normal and Congress-water days, we see that they are increased at every hour of Congress-water days, except from 10½ A.M. to 12 M.:

Quantity and Solids of Urine per Hour (in Cubic Centimetres and Grammes).

	Day.	6—8½.		8½—9½.		9½—10½.		10½—12.		12—2.		2—4.		4—6.		6—10.		10—6.	
		Qu.	Sol.	Qu.	Sol.	Qu.	Sol.	Qu.	Sol.	Qu.	Sol.	Qu.	Sol.	Qu.	Sol.	Qu.	Sol.	Qu.	Sol.
Normal Days.	1st.	18.4	.92	42	1.26	39	1.09	32.6	1.30	41	1.39	57.5	2.30	38	1.52	35	1.82	20	1.24
	2d.	20.8	1.44	42	1.68	52	2.08	47.1	1.94	90	1.44	81.5	1.54	40	1.36	40	1.76	25.7	1.23
	3d.	32.8	1.37	101	2.22	160	1.61	145.3	1.59	153	.97	99	1.68	75	1.65	46	1.74	25.5	1.27
		24.0	1.24	61.6	1.72	83.6	1.59	75.0	1.61	94.6	1.26	79.3	1.84	51	1.51	40.3	1.77	23.4	1.24
Congress-Water Days.	1st.	57.2	1.85	258	1.29	103	1.04	160	1.60	87	2.26	87	2.52	34.5	1.24	44.5	2.04	22.2	2.49
	2d.	37.6	1.24	124	1.73	181	0.90	87.3	.83	193	0.83	70.5	1.55	44	1.49	39.2	1.49	22.7	1.18
	3d.	59.6	1.48	78	2.65	77	2.92	117.3	2.11	161	2.07	58	2.20	83	2.82	81.7	2.77	28.2	1.29
		51.4	1.52	136	1.89	120	1.62	121	1.51	113	1.72	71.8	2.09	53.8	1.85	55.1	2.10	24.3	1.65

As regards the effect of Congress water on the appetite, we see that it slightly increases it, as one would expect from the destructive metamorphosis of the nitrogenous tissues.

Having examined the effects of Congress water on the physiological processes of the body, we will see how the results compare with those produced by a similar water. Nauheim water and Congress water both contain carbonic acid, chloride of sodium, chloride of potassium, and carbonate of lime; the former having also chloride of calcium and magnesium, and the latter bicarbonate of magnesia. Nauheim is, however, richer in these main ingredients. Beneke has proved that Nauheim water increases the weight of the body by a higher degree of saturation with water; that it increases the morning and afternoon excretion of the body, but lessens that of night hours. We have tried to prove that Congress water lessens afternoon excretion, and increases morning and night excretion. Nauheim increases all the excretions on separate periods of the day, which would probably have been the result of my experiments with Congress water if, as in Beneke's experiments, the temperature had been higher, and the series had extended over periods of six days. The decrease of night excretion by Nauheim water was due to retention of water. During the whole day, when Nauheim was used, the body was in a higher degree of saturation with water. The action of Nauheim on urinary elements was in the main similar; and it slightly increased the demand of food. As regards my breakfasts, they merit the observation of Beneke: "Es ist beiläufig bemerkt (interessant hiermit zu erfahren), dass diese in den meisten Familien der höhern Gesellschaftsklassen Nord- und Mitteldeutschlands gebräuchliche Qualität und Quantität des Frühstücks nicht hinreicht, um die Bedürfnisse des Organismus bei mässiger Arbeit bis zur Mittagszeit zu befriedigen."

The action of Nauheim and that of Congress water on the body being very similar, we would naturally expect that Congress water would be at least worthy of recommendation in the same diseases in which Nauheim has been found useful. Hence we would use Congress water in the scrofulous and rheumatic diatheses; for by this means we would hasten the destructive and constructive metamorphoses.

Carbonated waters do not seem to be contra-indicated in cardiac hypertrophies, vascular stenoses, and valvular insufficiencies; at least this is the case with Nauheim, according to Beneke.

Congestion, catarrh, and flexion of the uterus are also probably benefited by Congress water, in connection with other treatment. The use of it in chronic gastric catarrh associated with congestion of the chylopoietic viscera has been of undoubted value.

Finally, Beneke holds that an aperient action of a chloride-of-sodium water is not necessary to its successful effect; also, that the ingestion of the water for an aperient purpose is erroneous, as it causes colonic innervation, and thence chronic constipation. In conclusion, I acknowledge many obligations to Beneke's work: "Ueber Nauheim's Soolthermen und deren Wirkungen auf den gesunden und kranken menschlichen Organismus," 1859,—a model for such investigations. As regards the medical value of this mode of investigation, we will quote Böcker, than whom no one is more able to speak on the subject: "Wie ein Genuss- oder ein Arzneimittel auf die beiden Grundprocesse des organischen Lebens, als welche wir Mauser und Verjüngung anzusehen haben, wirkt das zu wissen ist das erste Erforderniss in der Pharmakologie und eine solche Erkentniss bildet die Grundlage der rationellen Pharmakologie."

Appended are tables on which preceding statements are based:

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	Day.	Quantity of Ingesta.			Body-weight.		Quantity of all Excreta.	Renal Excretion.		Intestinal Excretion	Insensible Perspiration.
		Fluid c.c.	Solid.	Total.	Increase.	Decrease.		Quantity of Urine.	Uric Acid.		
Normal Series.	1st.....	1600	653	2253	...	272.4	7276.7	749	.430	418	3410.0
	2d.....	1630	641	2241	154.4	...		1057	.372		
	3d.....	1600	711	2311	...	353.8		1603	.216		
Congress-Water Series.	Average	1600	668.3	2268.3	...	157.2	2425.5	1129.6	.336	139	1136.6
	1st.....	2000	656	2656	...	254.0	8284.8	1588	.232	385	3324.0
	2d.....	2000	601	2601	18.2	...		1484	.200		
	3d.....	2000	828.4	2824.4	30.3	...		1437	.245		
	Average	2000	695.1	2695.1	...	66.5	2761.6	1503	.225	128	1108.0

	Body-weight.						Quantity of Urine, c.c.			Urinary Solids.			Insensible Perspiration.			Intestinal Excretion.		
	6—12.		12—6.		6—6		6—12.	12—6.	6—6.	6—12.	12—6.	6—6.	6—12.	12—6.	6—6.	6—12.	12—6.	6—6.
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.												
Normal Series.	...	163.3	27.2	...	...	136.3	176	273	300	8.6	13.4	18.6	331.1	594.6	603.0	228	...	...
	...	...	109.1	45.4	45.3	...	239	432	366	11.9	11.2	18.3	285.1	332.3	355.6	56	...	...
	...	335.6	...	...	27.3	...	561	654	388	10.4	10.4	17.8	245.6	276.2	386.8	102	32	...
		166.3	30.3			21.2	325	453	351	10.3	11.7	18.2	287.2	401.0	448.4	128.6	10.6	...
Congress-Water Series.	...	457.4	212.5	...	...	9.1	815	417	356	9.78	12.9	18.8	407.3	275.3	408.9	210	...	...
	136.1	...	...	199.5	81.7	...	530	615	339	13.7	9.8	16.2	276.1	374.7	377.2	...	51	...
	199.5	...	154.3	...	....	317.5	480	404	553	13.9	14.9	25.9	334.8	358.1	511.6	...	92	32
		40.6	55.7			81.6	608	478	416	12.4	12.5	20.3	339.4	336.0	432.5	70	47.6	10.6

	Day.	Thermometer.			Barometer.		
		6.30 A.M.	2 P.M.	9 P.M.	6.30 A.M.	2 P.M.	9 P.M.
Normal Days.	1st....	64	76	74	29.5	29.5	29.5
	2d.....	63	68	65	29.3	29.2	29.1
	3d.....	62	62	60	29.4	29.5	29.4
Congress-Water Days.	1st....	52	59	52	29.4	29.3	29.4
	2d.....	42	60	52	29.4	29.3	29.3
	3d.....	56	65	66	29.3	29.4	29.5

Mercurial barometer. No temperature-corrections.

TWO CASES OF DIABETES MELLITUS

SUCCESSFULLY TREATED WITH SULPHITE OF SODA.

BY G. B. KIEFFER, M.D.,

Carlisle, Pa.

IT can scarcely be doubted that in diabetes mellitus there exists a morbid condition not only of the spinal cord, but also of the organs of assimilation and nutrition. The disorder of the latter is probably dependent upon a derangement of the former, for it is well known that either an anæmic or an atonic condition of the spinal cord will almost certainly cause a hyperæmia of the organs of assimilation, especially if that portion be affected from which the nerves supplying these organs take their origin. Now, if the functions of the spinal cord are below the normal standard, derangement of the physiological or chemical forces must of necessity take place, and this derangement may possibly give rise to an excess of action by which not only starch, but other proximate principles of the food, are converted into glucose.

Unfortunately, our ideas of the pathology of diabetes are almost wholly derived from the post-mortem appearances presented in cases of this disease. These will frequently be deceptive, for, as may be imagined, secondary lesions are readily induced by the circulation of a foreign and probably injurious element in the blood, and by the enormous work performed by the kidneys in the excretion of the sugar.

It has therefore seemed to me that in the treatment of diabetes there are two prominent indications: 1. To restore the nervous system, and especially the spinal cord, to a healthy condition. 2. To arrest, if possible, the rapid chemical action at work in the portal system, and especially in the liver. By keeping these indications definitely in view, it has been my good fortune, within the last three years, to have proof of the good effects of a treatment based upon them. Only two cases of this disease have come under my charge during that time, but, the result having been in both instances exceedingly favorable, I have determined to report them.

Case I.—Mrs. ——, a lady formerly residing in Virginia, whose son was a physician of respectable attainments, and whose previous health had always been good, found her strength failing without apparent cause. At length she was obliged to take to her bed, and was regarded by her son and other excellent physicians as hopelessly ill.

At this juncture my friend Dr. W. W. Dale, of this place, was written to by one of the family, describing the case and asking advice. He presented the letter to me, and, after a due consideration of the symptoms detailed, it seemed to us that the case was one of diabetes, and we prescribed accordingly, requesting at the same time that a specimen of the urine should be sent to us immediately. On its arrival, it was

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found, on analysis, to contain a large amount of sugar, and the diagnosis was consequently fully confirmed.

With the view of meeting the first indication set forth in this paper, the following prescription was ordered:

℞.—Ext. Nux Vom., gr. x;
Ferri Redact., ʒj;
Quin. Sulph., ℈ij;
Pulv. Aloes, gr. x.
M. et fiat pil. No. xl.
S.—One three times a day before meals.

And, with the hope of arresting the chemical action, she was directed at the same time to take the following:

℞.—Sodæ Sulphitis, ʒss;
Aquæ, fʒvj; M.
S.—A dessertspoonful four times a day in a little water.

Improvement almost immediately followed, and in a very short time she had sufficiently recovered her strength to leave her bed. The urine gradually decreased in quantity, her strength returned, and five months later, while on a visit to some of her friends, she actually came to Dr. Dale's office, being, to all appearances, in the enjoyment of excellent health. This patient has since died of an attack of acute pneumonia, caused by exposure; but up to the time of her death there was not the least indication of a return of her former disease.

The following case is practically of more interest, since it was under my own immediate care, and the facts as here presented are taken from notes recorded at the time:

Case II.—Master E., a lad seventeen years of age, of bilious temperament, and rather large for his age, was brought to my office by his father, a farmer, on the 10th of October, 1869. He had been an invalid for a little more than a year, and had taken "considerable medicine" for disease of the stomach and liver. He complained of depression of spirits, pain in the head and back, loss of appetite and strength, of inability to work, and of a disposition to avoid company. He was somewhat emaciated, and had a cadaverous look, but his tongue was natural and his pulse was nearly normal. On inquiry, I found some disturbance of the urinary function, but to what extent the patient could not say, except that he was obliged to rise to pass his urine frequently during the night. I tested his urine, and found a large quantity of sugar. Diagnosis, diabetes. The following prescriptions were ordered:

℞.—Ferri Pyrophosph., ʒj;
Ext. Nux Vom., gr. x;
Quiniæ Sulph., ʒss;
Opii, gr. vj.
M. et fiat pil. No. xl.
S.—One half an hour before each meal.

℞.—Sodæ Sulphit., ʒss;
Syr. Zingiber., fʒj;
Aquæ, fʒvij. M.
S.—A dessertspoonful four times a day, an hour after meals, and at bedtime.

He was allowed a generous diet, including milk and cream, but restricted from all acids, fried meats and vegetables, rich pastry, fat meats,—especially pork,—coffee, and sugar. He was also directed to take a general bath three times a week, and to use frequent frictions to the spine. This constituted his whole treatment during all the time he was under my charge. The improvement was exceedingly rapid. On November 1, I requested him to measure carefully, once a week, the quantity of urine voided during twenty-four hours, with the following results:

November	1,	10½ qts.	1870, January	29,	4⅔ qts.
"	7,	9 "	February	5,	4¾ "
"	14,	8 "	"	12,	4½ "
"	21,	7½ "	"	19,	4¼ "
"	28,	" "	"	26,	4 "
December	5,	6½ "	March	4,	4 "
"	12,	" "	"	17,	3¾ "
"	19,	6 "	"	29,	3 "
"	26,	5⅔ "	April	7,	3 "
1870, January	4,	5½ "	"	23,	2½ "
"	17,	5 "	June	7,	1½ "
"	22,	5 "			

All medication was now discontinued, and ten days later he reported that he had passed, as before, one and a half quarts in twenty-four hours. The urine was again tested, and no sugar was detected. Since then his health has been good, except in November last, when he had a slight attack of typhoid fever; and now he is looking as strong and vigorous as though he had never been ill.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROFESSOR AGNEW, MAY 17, 1871.

Reported by Dr. Elliott Richardson.

DISLOCATION OF SHOULDER-JOINT.

C. B., æt. 52, fell on last Monday, the 15th inst., from a door-step to the pavement, striking his right arm. Upon comparing the shoulders a difference is seen. On the left side the shoulder is higher and rotund, and the arm hangs perpendicularly from the shoulder. On the right or injured side, however, the shoulder is not only lower, but the arm itself is relatively lower than on the sound side; the deltoid muscle is flat, and the acromion process projects so that the finger can be easily introduced between it and the head of the humerus. The elbow of the injured arm can with great difficulty be brought into contact with the side of the body, and other motions are limited.

On putting the hand in the axilla, a rounded prominence can be felt, which, on rotating the humerus, is found to rotate with it; this is the head of the humerus. When motion is made, little or no pain is felt; this would not be the case if fracture existed.

Therefore, the diagnosis in this case is *luxation of the head of the humerus downwards* into the axilla, the most common form of luxation in this region. After the head of the bone has been in the axilla for some time, it is drawn upwards by the deltoid and clavicular portion of the pectoralis muscles, until it rests firmly against the under surface of the coracoid process.

It is necessary, before making a prognosis, in cases of luxation of the humerus, to take into consideration the length of time that has elapsed since the injury was received, as well as the extent of injury at the time of accident. When the displacement has existed three or four months, very firm adhesions are apt to have taken place, rendering reduction either impossible or attended with danger from rupture of some of the large blood-vessels of this region. If there has been severe contusion of the shoulder, followed by much inflammatory action, the production of these adhesions is much more rapid and complete.

[Reduction was easily accomplished by La Motte's method, fixing the scapula by placing the foot upon the acromion process and making extension by drawing the arm upwards.

A Velpeau bandage was applied to the injured arm and directed to be retained for two weeks.]

NECROSIS OF SEVERAL BONES.

W. M., æt. 14, presents a curious-looking tumor on the ring-finger of his right hand. This tumor is about one inch in diameter, and situated on the dorsal aspect of the first phalangeal joint. This growth bears a strong resemblance to an enchondroma, but on introducing a probe through a small opening, necrosed bone is detected.

Upon looking at the other fingers, cicatrices are found where fragments of dead bone have been extruded. A portion of necrosed bone is also detected in the little finger. The parents of the boy inform us that for the last six years he has been subject to this trouble, and small spiculæ of dead bone have come away from different parts of the body.

The peculiar appearance of this growth upon the finger is due to an implication of the synovial membrane of the joint.

Upon auscultating the lungs, prolonged expiration is heard,—another evidence of strumous cachexia.

The case will be treated, for the present, with remedies

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adapted to the general condition, and he will be ordered to take

Syr. Ferri Iodid., gtt. iij;
Ol. Morrhuæ, fʒij,

three times a day.

DEFORMITY OF HAND FROM CICATRIX.

W. McC., æt. 12, applies for the relief of this deformity. The middle, ring, and little fingers of the left hand are drawn down into the palm, and firmly held there by bands of tissue, —the cicatrix of an old burn. This does not involve the tendons, but the skin and fasciæ only.

Dr. Agnew decided to divide the bands of tissue, with a view to restoring the fingers to a proper position and to usefulness. The knife was introduced between the band of dense tissue and the tendon, transfixing the parts at a point opposite the upper third of the first phalanx, and an incision was made downwards and forwards on the palmar surface of each finger, cutting a tongue-shaped flap about three-fourths of an inch long, which was allowed to contract. The anchylosis of the fingers was then broken up, and the lateral edges of each wound were approximated by silk sutures. A compress moistened with a mixture of tincture of opium and water, one part to six, was applied, and the hand bound upon a straight palmar splint, well padded.

CORRESPONDENCE.

ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY AT WILLIAMSPORT.

THE late convention of the State Medical Society will not be particularly remembered hereafter on account of the amount of business transacted; for, beyond the exhibition of one or two improvements in surgical appliances, the reading of some statistics, and the presentation of the usual reports of county societies (which latter were not read, but referred to the Committee on Publication), not much was accomplished. True, the address, delivered by Prof. Gross at the handsome little Academy of Music, was a production of pre-eminent merit, and well worthy of its author. It was no less comprehensive in its vast gleanings than truthful and original in its deductions, and, independent of its general interest, attracted attention by its forcible style and by the manner of its delivery. But the address, delivered at night, and listened to not only by the Medical Convention, but by the Editorial Congress —also in session at Williamsport—and many ladies, seemed rather a bright auxiliary than a regular part of the proceedings.

The passage of one resolution and the rescinding of another, however, will make the present convention memorable. The former was offered by Prof. Gross, and was as follows:

"*Whereas*, The meetings of our Society have hitherto been, in great degree, barren of scientific and literary papers, and therefore deficient in actual interest; therefore be it

"*Resolved*, That it shall be the duty of the President annually to appoint some member to deliver an address in medicine, an address in surgery, and an address in obstetrics, reviewing the progress during the previous year of these respective branches of medicine and their collateral sciences."

The resolution rescinded was the famous one of 1860, whereby members of the association were prevented from consulting with female physicians or with physicians who held positions in women's colleges or hospitals.

The first shot fired on this subject was by Dr. Washington L. Atlee, who stated that this convention at its last session had moved to refer this question of consulting with females to the American Medical Association; and as that body, by admitting Dr. Thomas as a delegate from the Women's Hospital, had practically decided the matter, he therefore moved that all resolutions affecting the status of women's colleges and female physicians be rescinded.

Dr. Atkinson denied the statement of Dr. Atlee relative to the admission of Dr. Thomas, and furthermore stated that he (Atkinson), as permanent Secretary of the American Medical Association, would, in the present condition of the question, refuse to place the name of Dr. Thomas upon the roll of that Association.

Dr. Andrew Nebinger, in slow and deliberate rhetoric, opposed the rescinding of the resolution, and kept the floor until the hour of adjournment. He also occupied the initial hour of the afternoon's session, and was the only one who spoke against Dr. Atlee's resolution.

Dr. Trail Green, of Easton, stated that at the time the original resolution was passed it probably represented the feeling of the profession, but a different state of affairs exists now. He said that women have taken precedence in the completeness of their medical education, and cited the Women's College of New York as having a board of examiners composed of such men as Willard Parker and Austin Flint. He also said they (the women) are ahead of the men in having so divided their studies that both courses shall not be attended in the same year, thus preventing the manufacture of so-called doctors in ten months, as can be done in connection with some of the medical colleges for male students. In conclusion, Dr. Green remarked that menstruation, and another condition with which men have a good deal to do, should be no bar to the rescinding of the resolution under consideration.

Dr. J. Solis-Cohen moved to amend the resolution by adding to it that nothing in the rescinding shall be construed so as to allow women to be represented in this Society. The amendment was accepted, and proved a sufficient sop to Cerberus, for a call immediately afterwards to postpone indefinitely the whole subject was lost by a tie vote, and on the yeas and nays being called the resolution of 1860 was rescinded by a vote of 55 to 45.

With two exceptions (Drs. Atlee and Drysdale), the entire delegation from the Philadelphia County Medical Society voted *not* to rescind. The vote of the Lycoming County Medical Society was unanimous for rescinding.

A growing abuse in the State Medical Conventions is the introduction, under business heads, of strictly personal matters, generally grievances, and the right claimed to publish the same along with the legitimate proceedings of the Society. The voluminous pages read before the present convention by Dr. Halberstadt, relative to a professional feud, and the dreary and long-spun manuscript concerning the quarrel between the old Berks County Medical Society and the present Medical Society of the County of Berks, illustrate the truth of my statement. The present Yandall-Gaillard imbroglio is a melancholy evidence to what length such strictly personal matters may be carried, obtruding themselves not only into conventions, but occupying pages of medical magazines and secular journals, to the exclusion of profitable matter and the unlimited disgust of the readers.

This letter would be incomplete without a passing reference to Williamsport and the Lycoming County Medical Society. The former is a beautiful, progressive, and thrifty little city, situated on one of the forks of the Susquehanna. The hospitalities of its people to the members of the convention commenced with the latter's coming, and ended only with their departure. Mayor Perkins and the Congressional representative of the district, Hon. W. H. Armstrong, each gave the convention a handsome reception; and Mr. Peter Herdic took the entire body, by a special train, to the Minnequa Springs, forty-one miles north of Williamsport, and there liberally entertained them.

Among the more prominent physicians of Williamsport, members of the Lycoming County Society, are Drs. Thomas Lyon, J. S. Crawford, the newly-elected President of the Society, Samuel Pollock, appointed to deliver the next annual address on surgery, Thomas H. Helsby, and Edward Lyon.

In the adjoining county of Northampton lies buried the chemist Priestley, the discoverer of oxygen; and his lineal descendant, Dr. Joseph Priestley, now practises in the same county.

The next session of the Society will be held in the oil region,—Franklin, Venango County.

Let us hope that no oil will there be needed to "pour on troubled waters."

R. M. T.

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THE MEDICAL TIMES.
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SATURDAY, JULY 1, 1871.

EDITORIAL.

THE LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

II.

WHEN the College moved in 1845 into its new hall at the Mercantile Library building, which was furnished almost exclusively by private subscription, the first step taken in regard to the library was the preparation of a complete catalogue by the Library Committee, assisted by Drs. Griscom, Jackson, Patterson, and Parrish. This was accomplished in January, 1846, and showed that the library contained about six hundred volumes. Quite a number of contributions of books were received from various Fellows, and Dr. Henry Bond, a valuable officer of the College, gave the first large donation of books the library had ever received, consisting of sixty-six volumes in different languages and on a variety of medical subjects. The gift of seventeen volumes by Dr. George B. Wood is memorable as the first of a series of munificent donations, mainly of a pecuniary nature, lavishly bestowed during a quarter of a century, for which the College of Physicians must ever entertain a grateful and affectionate remembrance of their honored President. The library also during this year became indebted to Dr. Isaac Hays for a gift of thirty or forty French and German works, and has since received frequent contributions of books, and especially of periodicals, from the same source.

Permission was now granted the Philadelphia Medical Society—at this time on the eve of suspension—to deposit its library in the hall of the College, and a case was procured for the reception of the books. This Society was but two years younger than the College, having been instituted in 1789, but it was not destined to have so extended an existence. In 1846, after nearly sixty years of varying activity, it went into a condition of hibernation, from which it was only temporarily aroused by the stimulation of outside causes in the year 1859, when, after a very brief resuscitation, it finally ceased to exist. The books thus deposited in 1846—a few hundred in number—remained upon the shelves for thirteen years without any further action, when, in June, 1859, the Society determined to convey them into the actual possession of the College, under certain conditions as to their use by such of its own members as were not Fellows of the College. These terms were not, however, acceptable to the proposed recipients of the donation, and the books were therefore delivered to the President of the Society, about the end of this year. As part of the further history of this transaction, it may be stated that in February, 1868, a communication was received from the same society, offering a donation of nearly four hundred and fifty dollars to the College library, the interest of which was to be applied to its increase, and the Society to be credited with the donation on the book-plate. This was the sum which had been realized by the Society by the sale of the books already referred to, and the College added to it a sufficient amount to make five hundred dollars for investment, so that the latter eventually obtained a small permanent fund for the purchase of a few books annually, after the lapse of nearly a quarter of a century from the time the offer of the books was first made.

During 1847 and 1848 the tables were filled with journals, the library was open for their perusal from 11 to 2 o'clock, and the Fellows were allowed dead-latch keys to the room; but the books could be seen or obtained only at the stated meetings. To remedy this inconvenience, the keys of the cases were left in the table-drawer, with the explicit understanding that no book was to be taken from the room, a printed placard to this effect being displayed on the bookcases. The exchanges at this time embraced all the medical journals of the country,—eighteen or twenty in number; but so many of the copies either failed to be received, or were taken home by the Fellows to be read at leisure and then laid aside and forgotten, that this plan of free access without, as at the present day, a responsible superintending officer, failed to work satisfactorily. In June, 1849, the College, on the motion of Dr. Parrish, took the first action looking to the establishment of a museum or cabinet of pathological specimens; but we need not here dwell upon the subsequent proceedings in regard to this important point, as the establishment of the museum, the gift of pathological specimens and money from Dr. Thomas D. Mütter, the creation of a building fund, and the erection of the present edifice, —all of which subjects became afterwards intimately blended,—are only incidentally connected with our history of the library.

Nothing of interest now occurred until 1852, when, by direct appeals to the members, a sufficient number of journals and pamphlets had been obtained, mainly contributed to the library from individual searches among private collections,—odd numbers, perhaps, stored away in garrets and obscure closets,—to lead to the binding of nearly a hundred volumes, hitherto incomplete; and additional bookcases now became as much of a necessity as was a new hall for the general meetings of the College. As the accommodations were so limited that it was apparent there would be no room for the cases when they were constructed, the question of a change of location again promised to be the topic of the hour. The expansion of the library may therefore be said to have been the principal cause of the new arrangements which were soon afterwards

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made for the increased comfort and convenience of the College. The Secretary probably acted for many years in lieu of a librarian, for we find him, by an alteration of the by-laws in 1854, relieved from this duty by the appointment of a librarian as a regular officer of the College, annually elected. The committee had ceased to take charge of the giving out of books in 1852,—as they say, "since the appointment of a librarian;" but no one is mentioned on the minutes in connection with this position until 1855, so that it is presumable that, for two or three years, but slight facilities were afforded the Fellows in the use of the books.

The library, which was now getting rapidly larger by donations prompted by the increased interest felt in it by the Fellows, was removed in the summer of 1854 to the "Picture-House" of the Pennsylvania Hospital, in Spruce Street,—so called on account of West's celebrated painting, "Christ Healing the Sick," being placed there,—the College having adopted that as its place of future meeting. A revised catalogue was at once proposed, but not at once prepared. A lively interest in the College seems to have been reawakened at this time, for the meeting of October of this year was, almost without exception, larger than any ever held previously or even up to the present time, fifty-two of the Fellows being present, although there was nothing unusual to attract them. The first librarian, under the modified by-laws, which provided not only for the election of that officer but also of the Library Committee in January, was Dr. T. Hewson Bache, who for eight years continued to exercise the duties of the position with a zeal and fidelity creditable to himself and beneficial to the interests of the College. Hardly a full set of any medical journal—not even of its own Transactions—was at this time in the possession of the College. Every practicable effort was at once made to remedy such deficiency. So incomplete were some of the sets, however, that it was not deemed worth while to attempt to make them more perfect. At the February and April meetings of 1855, Dr. Alfred Stillé presented seventy-three volumes and forty-three numbers of valuable medical works, and Dr. Samuel Lewis, whose name a few years afterwards became permanently identified with the history of the library, gave fifty volumes, Dr. Moreton Stillé fifty-one, and others a large aggregate of equally useful works. So many numbers of medical journals were presented that a hundred additional volumes of periodicals were placed on the shelves, which otherwise would have been comparatively valueless. During a period of six months, two hundred and fifty-two books were also contributed by the Fellows, and one hundred and sixty-five other works were bound; and the library now amounted, after nearly seventy years of varying effort, to what, doubtless, seemed a magnificent total of seventeen hundred volumes,—only one-ninth of the number which at present constitute it, although but sixteen years have since elapsed. During this last period, the library has doubled itself more than three times. The library and new manuscript catalogue were ready for use in July. Upon the death of Dr. Moreton Stillé, in the fall of 1855, his widow presented to the College, through her brother-in-law, Dr. Alfred Stillé, a portion of his medical library, which had been collected by him "to foster his taste for literary and scientific culture," and was now given to those who were devoted to the same studies and pursuits. This donation comprised one hundred and nineteen separate works, in one hundred and thirty-seven volumes.

The total number of volumes in the College library reported January, 1857, was 2155,—"a very large number," says the annual report, "in comparison with its meagre contents, as some of the Fellows present will recollect them, when the library occupied a small and obscure corner of the stair-landing at the old Philosophical Hall on Fifth Street."

In October, 1857, Dr. Thomas F. Betton, who had during the previous year expressed a desire to give a large and valuable donation of books from his private library, communicated to the College his intention to convey into its possession his own medical library, and that of his father (Dr. Samuel B. Betton), amounting altogether to twenty-five hundred volumes, giving at once the periodicals and many curious old books, in order, as was very sensibly expressed in his note, "that they may be made of use, and not be kept slumbering on my shelves, to the advantage of no one." During the next six months, many hundred volumes were added from this source alone, and in 1864 a very large additional number. Dr. Betton's gift included some very rare and important works, and is worthy of record as the first massive contribution the College had received. It proved to be the library of a connoisseur, whose good taste in selecting the valuable materials which composed it was equalled only by his liberality in bestowing it where it would always be appreciated. The general library of the College thus received a stimulus the influence of which is felt even at the present time.

During 1858, Dr. Robert M. Huston contributed several hundred foreign and domestic journals. The library was reported on the 1st of January, 1859, as containing three thousand five hundred and sixty volumes, divided, in the catalogue, into folios, quartos, etc.,—an arrangement which has since been abandoned as useless and inconvenient. The Betton collection at this time included five hundred and seventy-two works, or about twelve hundred and sixty-five volumes. In May, 1859, it was determined to purchase the property at the northeast corner of Thirteenth and Locust Streets for the future permanent location of the College. A letter was received at this meeting from Mrs. M. A. Mütter, the widow of Dr. Thomas D. Mütter, who died during the preceding April, stating that it had been her husband's intention to give his medical library to the College, and expressing a desire to deposit it, to become a gift when the terms of agreement as to a new building for the museum should be fulfilled. The library was now kept open every Friday evening, from 7 to 10 o'clock, for a period of six months, under the charge of Dr. David Lewis, Librarian of the Pennsyl-

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vania Hospital. In June it received a valuable accession of select works,—a legacy from the former Secretary of the College, Dr. Henry Bond. At the expiration of the year, it was found that three hundred and ninety-seven volumes had been added to the College library, besides medical journals and pamphlets, and that the total number of books reached very nearly four thousand volumes, exclusive of four hundred and one works deposited by Mrs. Mütter.

Very little increase was visible in the library during the years 1860 and 1861. A committee of five—Drs. T. H. Bache, Ruschenberger, West, Lewis, and R. P. Thomas, to which Dr. Betton (who afterwards declined) and Dr. W. F. Atlee were added—was appointed in April, 1860, to prepare a catalogue of the books. This must have been a task of great magnitude, for it was not reported as complete until December of the following year. The committee was aided also by Dr. Stillé; but it is due to the then librarian (Dr. Bache) to state that "a large share of the labor of preparing the catalogue devolved upon him." Strange to say, this valuable compilation, the great desideratum of the time in which it was prepared, not long afterwards was mislaid or destroyed in some inexplicable way, greatly to the chagrin and disappointment of those especially who had zealously labored in its preparation. A very valuable gift to the library during 1862 was effected by private subscription of twenty-three Fellows of the College, being no less a present than one hundred and ninety-two volumes of the "Collection des Thèses soutenues à la Faculté de Médecine de Paris," from 1822 to 1846 inclusive. This is, without exception, the finest set—probably the only one—of these inaugural dissertations to be found in this country. In July, 1863, the College was informed that Dr. Isaac Remington had, during his last sickness, expressed a desire to leave it his medical library, consisting of ninety works, including one hundred and ninety-five volumes, and ten periodicals in one hundred and eighty-eight numbers, besides pamphlets; and the Library Committee was authorized to take action in regard to their reception.

In consequence of the absence of Dr. Bache on patriotic medico-military duties during the war of the rebellion, Dr. Walter F. Atlee was, in January, 1863, elected Librarian. The new building at Thirteenth and Locust Streets was in March declared ready for occupancy; the Building Committee soon after reported plans for cases, and ere long the library of the College, which having safely undergone the traditional three times of removal might now be considered fire-proof, was securely ensconced in its new and commodious quarters. It probably at this time numbered scarcely more than four thousand five hundred volumes. Dr. Charles S. Boker was, in January, 1864, elected Librarian, to be succeeded in 1865 by Dr. John H. Slack, who retained that position until the appointment of the present worthy and excellent incumbent, Dr. Robert Bridges, in 1868.

The recent civil war, during its earlier years, was evidently a disturbing element, even in the quiet operations of the library, for there seems to have been at this time a lull in the activity of the committee, probably because the attention of the Fellows was so seriously diverted by more stirring causes as to prevent them from contributing to any extent to swell the contents of the book-shelves.

The years 1864 and 1865 are memorable in the history of the College library for the remarkable addition to it of about forty-five hundred volumes, twenty-five hundred of which were given *en masse* by Dr. Samuel Lewis, of this city, whose interest in the library must have ripened into the warmth of affection to prompt the unselfish bestowal of such invaluable medical literary treasures. They were presented unconditionally to the College in a modest note of but three or four lines, with the earnest wish that they might tend in some degree to advance its interests and usefulness. The College officially returned him a vote of thanks for his munificent gift, and resolved that the books should be preserved as a separate collection, under the name of the "Lewis Library." In November, 1865, he was again thanked "for his renewed manifestation of interest in the welfare of the College,"—a deserved tribute to his liberality and zeal, which might stand permanently recorded in lasting appreciation of his almost daily contributions, the portion of the library bearing his name having been in less than seven years augmented by his own efforts to a sum total of over four thousand volumes. Rich as the College library may hereafter become from bequests from any source, it is doubtful whether any other collection, unless specially selected with a view to its future presentation, will ever be so carefully and tenderly nurtured as that which now perceptibly grows in importance and usefulness under the eyes of its generous donor.

During the next year (1865), Mr. George Ord, a gentleman of philological culture, who for many years had been a prominent member of the various scientific and literary bodies here and elsewhere, offered so tempting a collection of valuable scientific and miscellaneous works for the acceptance of the College, provided it was deemed advisable to go outside of the range of medicine, that the committee appointed for the purpose wisely determined not to lose this unusual opportunity of enriching the resources of the library. The College thus became possessed, in the spring of 1866, of a very choice collection, "comprising the best editions of the most eminent classical writers in the English and French languages, many volumes of interesting voyages and travels, and the best and largest collection of English and French dictionaries perhaps in this country, being the fruits of Mr. Ord's industrious collecting during more than half a century." The acquisition of these valuable works was doubtless intended to be without cost to the College; but, being a bequest, instead of an actual gift during his life, though promised before his death, the latter had to pay the collateral inheritance and United States taxes, etc., amounting to $350,—an unexpected expense, but a

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trifling one, when we consider that the library was appraised at a valuation of four thousand dollars. The sprinkling of miscellaneous books thus infused into the library may serve as a gentle reminder to those of the Fellows who are deeply absorbed in mere professional practice and routine journal and text-book literature, that the means of increasing their store of general information, and of becoming cosmopolitan in learning, are close at hand.

When the Library Committee made its annual report in January, 1866, there were said to be seventeen thousand titles of books in possession of the College, and it was regarded "as the best collection of medical works belonging to any similar institution in the United States." The new librarian, Dr. Slack, was credited with having contributed a large share of useful labor in connection with the care and arrangement of the library. The actual number of volumes had now risen to nine thousand five hundred and thirteen, and this amount was swollen by the receipt of the Ord library, in April, and by other donations, to a total of twelve thousand four hundred and forty-eight volumes before the close of the year. The library had now become so reliable and voluminous for reference that Dr. Wood, the President of the College, expressed in a communication to that body his earnest belief that more time should be allotted for access to the books and journals to enable practitioners who might wish hastily to decide some subject of direct interest or concern to themselves, or to while away an hour or two of leisure, or to investigate difficult or obscure points requiring extended reference to a number of authorities, to avail themselves of its advantages. To meet any additional expense that might be incidentally incurred, he generously offered to give the College five hundred dollars a year. This liberal offer was gladly accepted; the by-laws were altered to make the Librarian an ex-officio member of the Library Committee, which was increased to five; the Librarian was instructed to keep a record of the books, and report at each stated meeting; the library was to be open from 11 to 3 o'clock daily, and one of the committee was to attend regularly between those hours, for which duty he was to receive five hundred dollars a year. Dr. Robert Bridges was in June elected for this latter purpose, and by his careful attention to the requirements of the library from that time to the present, and his courteous, zealous, and efficient services,—which with each year's growth and use of the library must become more and more onerous,—has earned the grateful regard of all the Fellows of the College. In the following January he was also elected Librarian. Under his careful hand a voluminous alphabetical catalogue of the library according to authors has for some time been in preparation, and is now so far advanced that an important portion of it is ready for reference. To this will be appended a list of authors according to subjects, on the plan of the Edinburgh Library catalogue.

During the next four years the library grew very rapidly, as may be seen from the following table, founded on the annual reports of the Library Committee, presented each January:

	1868.	1869.	1870.	1871.
Lewis Library,	3098	3204	3449	3893
Ord "	2068	2068	1909*	1909
East and west rooms,	7216	8434	8744	9108
Total,	12,382	13,706	14,102	14,910

Besides these, there is a large number of duplicates, varying each year from sales or additions, amounting in 1868 to five hundred and ninety-one, and in 1871 to eight hundred and thirty-two volumes. The actual number of volumes at present in the library considerably exceeds fifteen thousand.

The use of the library by the Fellows has also steadily increased,—nearly six hundred volumes having been loaned during 1870,—although it hardly seems even yet that they have arrived at a full realization of the extent of the literary resources within their reach. As they become more conscious of the magnitude of its dimensions, of its richness for reference, and of its practical usefulness as a working library, their interest in it must be constantly augmented, and the halls of the College will doubtless in time be resorted to by a largely-increased number of the Fellows, awakened to a knowledge of the real value of the periodical and general literature so freely offered them. In the report for 1869, the committee, after congratulating the College on possessing, it is believed, the largest medical library in the United States,—the next in extent probably being that of the Pennsylvania Hospital,—remark, that "when it is remembered within how short a period this collection has reached its present size and acquired its great value, the hope is not an extravagant one that in a few years all of the available space in the College building will be required to contain the gifts of its benefactors." In February of this year, Bujalsky, a Russian surgeon, sent to the College from St. Petersburg a number of valuable books, including an illustrated folio work on lithotomy, etc., in the Russian language, the plates of which are twenty-three inches in length by thirty in width.

In January, 1869, the medical library of Dr. Francis West, who had for several years been a useful member of the Library Committee, was received as a bequest. It consisted of one hundred and twenty-four volumes and two hundred and twenty duplicates. In February, 1870, ninety-nine volumes on midwifery were received from the executor of the estate of Dr. Charles D. Meigs, in accordance with the terms of his will. The latest step taken by the College to extend the usefulness of the library was a resolution passed in April, 1871, to keep it open in the evening, from October 1 to May 31, twice a week, from 7 to 10 P.M., to enable the Fellows to consult the books and journals, with an assistant librarian to be appointed to attend to this additional duty. In

* A portion of this library, embracing kindred subjects on natural history, etc., was incorporated with the general library, the book-plate, of course, crediting them to the Ord bequest. This will account for the apparent diminution of the number of volumes.

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this manner a more social feeling will doubtless be diffused among the members of the College, which will inevitably have an important and beneficial effect in creating a wide-spread interest in the library and in the institution which is its fortunate possessor.

A number of the Fellows have, within the past two or three months, organized a "Journal Association of the College of Physicians," for the purpose of creating, by private subscription alone, a fund for the purchase of foreign and domestic current medical literature, which, after being left on a special table in the room of the College for a sufficient length of time, is to be given, in complete volumes, to the library. The main object is to supplement in this way the list of journals already regularly taken by the College, by adding others which it is desirable it should possess. This new plan of increased supply is meeting with great favor and success, and is likely to be a permanently attractive feature. The idea is not an entirely new one, having been agitated in January, 1856, but not practically carried out. Medical pamphlets of all kinds, as well as the Transactions of medical societies here and elsewhere, are also received, and will be welcomed as acceptable contributions from professional gentlemen in any portion of this country, either to this Association or to the College, which latter will transmit its own Transactions in exchange.

The following gentlemen have constituted the Library Committee from 1845—the date of removal to the Mercantile Library building—to the present time. 1. At the Mercantile Library, Drs. West, Pepper, and Reese. 2. At the Pennsylvania Hospital building, Drs. West, Reese, Lewis, Lajus, Betton, W. F. Atlee, and Stillé. 3. At the College building, Thirteenth and Locust, Drs. Lewis, Stillé, Atlee, Bridges, and J. Ashhurst, Jr. Their services have been attended with the best results to the interests of the College. They have, during some of these years, accomplished a good deal, with little or no annual appropriation of funds; and although a more just and generous amount is now granted them for current expenses, the great increase of the library has been effected almost entirely without expense to the College, so numerous have been the donations of books. It is impossible, and would indeed be inexpedient, to mention in detail the names of all the benefactors of the library, some of whom have given largely from their own literary resources in one or two instalments, and others but a little at a time, and yet frequently. Without making invidious mention, it may be truly stated that, while the College feels grateful to all the contributors to the library, it must feel especially so for numerous and valuable gifts of books and periodicals by Drs. Alfred Stillé, John Bell, S. Weir Mitchell, Francis W. Lewis, Walter F. Atlee, Samuel D. Gross, George W. Norris, Edward Hartshorne, Joseph Carson, Charles D. Meigs, Charles W. Pennock, Robert P. Harris, and William Ashmead, in addition to those already mentioned. They have all been actuated by the same spirit, as contributors to the general good of the profession. As gratitude has been ironically defined as "thankfulness for favors to come," the College may truly congratulate itself on the future of its library, which will undoubtedly receive hereafter, from some of its warmest friends of to-day, large accessions of valuable, curious, and standard works. Let us hope, however, that the day is far distant which shall produce the enrichment of the library as the result of the loss to the College, the profession, and the world, of the valuable services of any one of them!

Of the character of the books now constituting the library, much might be said, had we the space to describe them at length. Suffice it to say that the College library proper is rich in the general walks of medical literature, and especially in American, French, and German journals, and that it contains numerous classical treatises and curious old works, such as would delight the student and the antiquary. One of these very rare old books is an American work, "printed and sold by B. Franklin, 1745," entitled "An Essay on the West India Dry Gripes," by Dr. Thomas Cadwalader. Curiously enough, it contains two prefaces, each dated "New Jersey, Trenton, March 25, 1745," one of them being pasted on a fly-leaf, from which fact it is inferred that it was probably the author's private copy, and that, being dissatisfied with one preface, he substituted another, and kept them both for his own reference. The Lewis library is very valuable for its completeness in old English journals, curious old books,—some of them dating as far back as the sixteenth century, including among other works a fine collection of the School of Salernum,—all the best medical works of the day in their original editions,—not a reprint being found in the whole library,—and seven or eight hundred articles on fever. The philological character of the excellent Ord library has already been referred to.

The main rooms of the library are embellished, in some of the available spaces, by the portraits of deceased officers and Fellows of the College. Included among these are paintings of several of the former Presidents, —Drs. John Redman (1787–1805), William Shippen (1805–1809), Thomas Parke (1818–1835), and Thomas C. James (1835). These were all given by Dr. George B. Wood in 1865 and 1866, that of Dr. Redman being copied from a small water-color portrait presented in 1865 by the heirs of Dr. John Redman Coxe, which also occupies a small corner in the library. Dr. John Neill in 1867 contributed a portrait in oil of his father, Dr. Henry Neill, and smaller likenesses of Drs. Benjamin Duffield and John Church. A portrait of Dr. Abraham Chovet, anecdotes of whom are connected with Philadelphia local history of the latter part of the last century, was presented the same year by Mrs. L. C. Hay, of Trenton, N.J. An oil-painting of Dr. John Foulke, one of the founders of the College, was presented by Mrs. W. Parker Foulke; a small print of Dr. S. P. Griffitts, one of the early founders, by Dr. Carson; one of Dr. John Syng Dorsey, by Mr. Charles Hart; an artistic oil-painting of Hippocrates,* exe-

* This painting was based upon the bust of Hippocrates in the possession of the Pennsylvania Academy of the Fine Arts,—itself copied from a historic medal.

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cuted by herself, by Miss Fanny Darrach; and an excellent photograph of Dr. Robley Dunglison, by Dr. Richard J. Dunglison. There is also in the museum a fine portrait of Dr. Thomas Dent Mütter, by Huntingdon. As far back as the year 1850, the Library Committee were requested "to have copies of such engraved likenesses of deceased Fellows as have been published, for the purpose of having them also framed and suspended in the chamber;" but no action has ever been taken in regard to it. It is to be hoped that in time busts of the most honored Fellows of the College may also adorn the now empty spaces over the projecting bookcases. An album is kept in the library for the reception of the photographs of all those connected with the College who feel disposed to contribute to it. The library is usually closed in the summer for a period of about six weeks. Members of the profession who are not Fellows of the College are allowed free access to the library at the regular hours, on introducing themselves to the Librarian.

DR. CHISOLM'S CASE OF ANTERIOR LUXATION OF THE SEMILUNAR BONE.

WE made, as we thought, an unimportant alteration in the wording of the heading of the article contributed by Dr. Chisolm to the last number of the *Times*, and added the words *Excision—Recovery*. Dr. Chisolm, however, writes us that he regrets the change, and that

"The report of the case was made on account of the rarity of the accident, and the excision was only mentioned to substantiate the diagnosis and to explain the impossibility of reduction. As the report was sent to you only three days after the operation of excision had been performed, time had not been allowed to ascertain results; and hence all reference to the latter was purposely avoided.

"Seven weeks have now elapsed since the operation of removing the semilunar bone. Suppurative inflammation of the wrist-joint has been severe, and it may yet become necessary to amputate the limb."

TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a stated meeting of the Pathological Society, held May 23, 1871, the President, John Ashhurst, Jr., M.D., in the chair,

DR. HARRISON ALLEN presented a specimen of *epithelioma of the penis*, from J. P., æt. 55. Of temperate habits, he enjoyed good health until last December, when he noticed warty growths upon the prepuce, accompanied with some pain. He was admitted to Philadelphia Hospital, April 12, 1871. The growth at that time presented undoubted characters of epithelioma. Both prepuce and glans penis were involved. The surface was lobulated and knobbed; in places ulcerated, and exhaling an unpleasant odor. There was no enlargement of the inguinal glands.

On May 3, the left groin being carefully examined, an enlarged and indurated gland was found. The growth at this time measured 6½ inches in circumference and 2⅛ inches in its greatest diameter. It was removed by the *écraseur* May 20. Twenty-five minutes were occupied in the operation. No hemorrhage followed. The gum catheter was not here introduced previously to the operation. The patient has done well since in every way.

The PRESIDENT said that there was sometimes difficulty in cutting through the catheter with the *écraseur*, and recalled a case which occurred in this city some years ago, in which, an attempt having been made to amputate the penis with the instrument in question, it was found necessary to remove the catheter before the operation could be completed. In the ordinary operation with the knife, there is no risk of contraction, provided that the spongy body is cut a little longer than the cavernous bodies, when the urethra can be split, and the mucous membrane turned out and fastened with sutures to the skin of the penis, so as to form a new meatus.

DR. W. W. KEEN asked Dr. Allen what were his views with regard to the propriety, in general, of removing such affected inguinal glands. He thought the circumstances parallel to those which called for the excision of axillary glands in mammary cancer, a proceeding frequently adopted in the latter case, but only rarely in the former.

DR. ALLEN replied that he should think well of such removal where the involved gland was of slow growth, but that where the growth of the gland was as rapid as in this instance, he should think it inexpedient to operate. He considered it likely that in this case the deep pelvic glands were also involved.

The specimen was referred to the Committee on Morbid Growths, who reported, June 8, that it was "a well-marked case of epithelioma, presenting its usual microscopical characters."

DR. W. F. JENKS presented a specimen of *congenital sacral neuroma amyelinicum, followed by hydrocephalus and death*, with the following history:—

The mother states that during gestation she suffered from a constant dragging pain in the right side. The labor, however, was normal, unattended with unusual hemorrhage, and the placenta, which was examined by the physician in attendance, was pronounced to be healthy. At birth, the head of the child was of moderate size, the body well formed, except that an unnatural opening existed over the sacral region, extending two and a half inches downward from the last lumbar vertebra, and being about two inches wide at the broadest part. From this irregularly oval cavity there exuded for some days after birth, after a large, firm coagulum, which completely filled it, had been removed, a thin serous fluid. Cicatrization gradually took place, and when the child first came under observation at the clinic of the University, the sacral region presented the following appearances: The cutis covering the place which had been open at birth was of a livid bluish hue, exceedingly delicate,—so thin, in fact, that rupture seemed imminent, bulging out in places in the form of small bullæ. Around this central portion the skin was indurated, of a deep scarlet color, and stretched tightly over the subjacent parts. The spinous processes of the rudimentary vertebræ could be felt widely separated on each side, while the space between them gradually diminished until the fourth lumbar vertebra was only partially cleft. After the complete closure of the sacral opening, which took place about the fourth week of life, hydrocephalus gradually developed, and the head of the child now presents all the characteristic deformities of this condition. The left side was, however, much more prominent than the right, this semicircumference being in fact nearly an inch larger than the other by actual measurement. No systolic blowing-murmur is heard over the tense and prominent anterior fontanelle. Convulsive movements of the lower extremities occurred when the hydrocephalus first commenced to develop rapidly, but of late have been wanting. There is partial paralysis of motion and sensation in the lower extremities. The intelligence of the child is good. The mother states that during the first week after birth it frequently voided bloody stools, and that later it suffered continually from intestinal derangement. It gradually sank, and died two weeks after it first came under treatment.

A post-mortem examination was obtained with difficulty, and, owing to continual interruption by the friends, was necessarily incomplete. Of the *brain*, the left ventricle was distended by about a quart of clear, transparent yellow serum,

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less than half an inch in thickness, and only a thin shell of brain-tissue remained. The right ventricle contained but a small amount of fluid.

The tissues over the sacrum were removed for a more careful examination. The membranes of the cord are thickened. The central spinal canal is distended to the diameter of a tube the size of a crow-quill, on the sides of which the nerves can be seen flattened out, and spiral in their course. At the extremity of the spinal cord, and corresponding to a slight umbilication of the integuments, there is a tumor the size and shape of a peach-kernel, which, when first examined, was of a pale-grayish color. The elements were so closely matted together as almost to give the impression of a homogeneous mass. Since maceration in dilute chromic acid, it has a more spongy appearance, and can be readily picked apart for microscopical examination. This growth is enclosed in the thickened dura mater spinalis, from which, however, it can be easily separated. With a low power (No. 4 Hartnack) it seems to consist of countless fibres interlacing with and crossing one another in all directions, and can scarcely be distinguished from an ordinary fibrous tumor. When examined with a No. 10 immersion lens, it can be resolved into delicate fibrillæ, having only a single contour, in which numerous small oval nuclei are visible. These fibrillæ are stained with carmine, and can be traced here and there to bipolar or multipolar ganglionic cells. In one instance one was followed into a nerve provided with a medullary sheath; in other words, its identity with the axis-cylinder of the nerve was proved. The tumor is mostly composed of these primary nerve-fibrillæ without any medullary sheath. Here and there portions of myelinic nerves can be seen, the nuclei, which are normally present in small numbers in the membrane of Schwann, being in a state of proliferation. The tumor therefore belongs to that variety of neuromata where the nerve-fibres concerned are those of the so-called amyelin nerves, and has been described by Virchow under the name of neuroma amyelinicum (*Die Krank. Geschwülste*, vol. iii. p. 282).

Dr. R. M. Bertolet said great difficulties are usually experienced in distinguishing, even with the use of high microscopical lenses, the amyelinic neuromatous structure from that of the finely-fibrillated fibroma so frequently met with in neoplasms of the nerves. Staining the tissues with a solution of chloride of gold is suggested as being likely to facilitate the establishment of a differential diagnosis. This method of coloring can also be pursued with advantage in specimens that have been kept for some time, since, according to Gerlach's method of combining the terchloride of gold with potassium, it is no longer absolutely essential that the nerve-structure be fresh. In fresh material, osmic acid might also be found of service, by rendering the axis-cylinder more conspicuous.

Dr. R. M. Bertolet presented a *bronchocele* which was obtained from the body of a man about fifty years old. Although it is not of that colossal size so often attained by these tumors, and although no symptoms of compression manifested themselves during life, yet the specimen is interesting from the fact that it presents us with numerous secondary pathological changes, which may all be readily shown to originate in true and simple hypertrophy of the glandular structure,—the *struma hyperplastica* of the pathologists.

The left lobe of the thyroid gland is unaltered, excepting at its lower and outer border, upon which are seen numerous bead-like follicular enlargements. The stroma, or interfollicular connective tissue, has here undergone little or no change. Some of these enlarged follicles are firm, and, to the naked eye, do not present any marked alterations from the surrounding healthy structures; others, again, are filled with an amber-colored, soft, gelatinous or colloid mass.

In the right lobe, similar but more extensive changes have taken place, and, by the confluence of the distended follicles, two large *cysts* have been formed. They were filled with a dark-red fluid, containing epithelial cells, blood-corpuscles, fat-globules, and crystals of cholesterine. The walls of the cysts are thickened, and have become ossified in the smaller cyst lying in the centre of the lobe. The microscopic examination revealed the presence of true osseous structure.

Dr. James Tyson described a case of *cancer of the head of the pancreas*, involving also the *pyloric end of the stomach*, producing partial obstruction. Although he was not able to exhibit the specimen, which he was not allowed to remove, he thought the case worthy of a record in the Proceedings of the Society, since one of the most valuable reports extant upon this subject was made to this Society by one of its members.*

R. J., aged 63, a laborer, complained at intervals during the past ten years of violent abdominal pain, which was generally relieved by hot applications. Since November, 1870, the pain has recurred more frequently, has been more severe, and obstinate constipation has presented itself in addition to the other symptoms. For four weeks also previously to his death, which occurred April 29, there was incessant vomiting, and during the few days before his death in which he was under observation, all ingesta were vomited at varying intervals after their introduction to the stomach.

When he came under observation he was much emaciated and very feeble, evidently approaching death. At the first examination there appeared distant dulness on percussion to the right of the epigastrium, and a tumor was apparently present in this situation. But subsequently, although the belly was scaphoid, no dulness could be discerned, and the tumor had changed position; later it was noted in the lower part of the abdomen, and disappeared after an evacuation of scybalous matter had been obtained by copious injection, showing that what had at first been taken for the tumor was merely hardened fecal matter in the colon.

At the post-mortem examination the head of the pancreas was found to be the seat of a hard cancer, which had apparently extended by continuity to the pyloric end of the stomach. The pyloric orifice was contracted but patulous,—so much so that it was surprising that there should have been such entire rejection of ingesta.

Dr. John H. Packard related a case of apparent *tuberculosis* in a child 4 months and 21 days old. When born, the infant was remarkably large and strong, and seemed healthy; but five weeks later, after taking cold, symptoms of bronchitis set in, the child gradually became emaciated, and died with evident symptoms of deficiency in the amount of breathing-space.

At the post-mortem examination, the lungs were found filled with a deposit exhibiting the gross characters of tubercular matter. There was no evidence of pleurisy. Only the chest was examined, no symptoms having been present pointing to involvement of any other organs.

Dr. P. desired to know the experience of other members of the Society as to similar cases.

Dr. John S. Parry said that the striking peculiarity in the case detailed by Dr. Packard was the age of the child; but he thought that tubercular disease and cheesy pneumonia were not very rare in children of this age. Generally the disease is rapid in its course, and the tuberculosis involves a large number of organs, but the mode in which the lungs are involved is not the same as in adults, because the seat of cavities is not the apices of the lungs, but the lower lobe or the lower portion of the upper lobe. A case between three and four months old had come under his care at the Philadelphia Hospital, in which capillary bronchitis had been diagnosticated on the evidence afforded by submucous râles; the diagnosis was corrected by the calor mordax which was present. The child soon died with tubercular disease of the membranes of the brain, lungs, liver, and spleen. The doctor had noted from two to four such cases in children under a year old at the Philadelphia Hospital, in a single term of six months.

Dr. Packard asked whether there were not in these cases alluded to by Dr. Parry other symptoms than diminution of breathing-space, such as diarrhœa, or evidences of impaired nutrition.

Dr. Parry replied that there were not necessarily such additional symptoms, though the disease might supervene in the course of a diarrhœa in the summer months. In this particular instance the child was really fat, and one of the strongest children in the wards. The symptoms were entirely pulmonary until the tubercular meningitis supervened.

* Da Costa, Cancer of the Pancreas. Proceedings of the Pathological Society of Philadelphia, vol. i. p. 103.

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BOOKS AND PAMPHLETS RECEIVED.

Principles and Practice of Dentistry, including Anatomy, Physiology, Pathology, Therapeutics, Dental Surgery, and Mechanism. By Chapin A. Harris, D.D.S., etc. Tenth Edition, Revised and Edited by Philip H. Austen, M.D. With 409 Illustrations. 8vo, pp. 794. Philadelphia, Lindsay & Blakiston, 1871.

Wear and Tear, or Hints for the Overworked. By S. Weir Mitchell, M.D., Member of the National Academy of Sciences, etc. 12mo, pp. 59. Philadelphia, J. B. Lippincott & Co., 1871.

A Treatise on Diseases of the Nervous System. By William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System and of Clinical Medicine in the Bellevue Hospital Medical College, etc. 8vo, pp. xxv., 754. New York, D. Appleton & Co., 1871. For sale by Claxton, Remsen & Haffelfinger.

On the Physiological Effects of Severe and Protracted Muscular Exercise, with Special Reference to its Influence upon the Excretion of Nitrogen. Reprinted from the New York Medical Journal, June, 1871. By Austin Flint, Jr., M.D., Professor of Physiology in Bellevue Hospital Medical College, etc. 8vo, pp. 91. New York, D. Appleton & Co., 1871. For sale by Claxton, Remsen & Haffelfinger.

Report of Eastern Lunatic Asylum of Virginia. Pamphlet, pp. 46. Norfolk, 1870.

Infant Mortality and the Necessity of a Foundling Hospital in Philadelphia. Lecture before the Social Science Association of Philadelphia. By John S. Parry, M.D., etc. Pp. 28.

The Detection of Criminal Abortion. By Ely Van De Warker, M.D. Pamphlet, pp. 16.

GLEANINGS FROM OUR EXCHANGES.

TROPHIC NERVES.—Prof. Wm. Rutherford, in his Lecture on Experimental Physiology, published in *The London Lancet* for April 29, 1871, contends for the existence of *trophic or nutrient nerves*, independently of the nerves which regulate the blood-supply. He adduces in favor of their existence—1. The fact, admitted by Prof. Hermann in his Text-Book of Physiology as unequivocal, that when a nerve is cut off from its centre it degenerates,—*i.e.*, if the posterior root of a spinal nerve be divided on the distal side of the intervertebral ganglion, the portion cut off from the ganglion degenerates; that (central) in connection with it preserves its integrity. If, again, it be cut between the cord and the ganglion, the portion (central) cut off from the ganglion degenerates, while that (peripheral) still joined to the ganglion remains intact. The results appear to show that the intervertebral ganglia are trophic centres for the afferent nerves. Similar experiments seem to show that in the spinal cord are the trophic centres for efferent nerves. The effect of loss of function in producing atrophy is admitted, but the lecturer properly states that this fails to afford an explanation why the *peripheral* and not the central end of the posterior sensory root degenerates, when a cut is made on the peripheral side of the intervertebral ganglion. But he also desires to be understood as admitting that *pure inaction of tissue, as well as suspension of trophic influence, produces degeneration of a nerve.* 2. Evidence is adduced in the fact which he acknowledges proven, that the chorda tympani and sympathetic, in presiding over the salivary secretion, cause increased growth of the cell elements. 3. Inflammation of the eye after section of the ophthalmic branch of the fifth pair, is thought to tend to the same end, notwithstanding the assertion of Snellen and Büttner that it is due to irritation of foreign matters admitted on account of loss of sensibility; since Meissner and Schiff have shown that the inflammation follows a partial section of the nerve, which leaves the sensory fibres intact. And, quite recently, Sinitzin has shown that inflammation does not follow if the blood-vessels of the eye be paralyzed by removal of the superior cervical ganglion. Prof. Rutherford believes that the difficulty of separating the vascular from the trophic disturbance in such cases is the cause of the obscurity which yet hangs over many of the facts regarding trophic nerves.

REMOVAL OF STONE-FRAGMENTS BY SIPHON-SUCTION.—Prof. Dittel, of Vienna, discovered, in the course of some experiments (*Practitioner*, for March, 1871, from *Wiener Medizinische Zeitung*), that the fragments of the stone left in the bladder after the operation of lithotrity could be removed by means of a siphon apparatus, made by attaching an india-rubber tube, the free end of which passes into a vessel on the floor. This simple instrument was used with great advantage in the case of a patient in Dr. Dittel's wards. Since then he has had occasion to use it repeatedly, to discover its faults and to improve it. The apparatus which he has found most useful consists of a catheter with a short curve like that of the scoop, and having a large eye well forward. The point as far as the eye must be filled up, that fragments may not get lodged there and cause injury to the urethra in extraction. To the handle of the catheter is attached an additional piece. This consists of a tube, six centimetres long, into the midst of which a tube, two centimetres in length, opens at right angles. The additional piece has, therefore, three limbs,—catheter limb, outflow limb, syringe limb. Where these three tube-limbs come together, there is a stomach-pump valve arrangement. In the first position of this the water can only be sent from the syringe to the bladder; in the second position, the water can only flow from the bladder into the outlet tube. In this way, without removing the tube from the lower vessel, we can make the extraction almost continuous as long as we think proper. There is no doubt that by such continuous extraction we spare the patient the irritation from the impaction of fragments in the urethra; and this is clearly, Prof. Dittel thinks, a not unimportant advantage of the apparatus. But a yet more important merit is that its use eliminates paralysis of the bladder from the list of the contra-indications of lithotrity.

This apparatus may also be used in the treatment of chronic catarrh of the bladder, because the mucus and pus lying on the floor of the bladder and acting as the ferments of the urine can in no other way be so completely removed.

THE ACTION OF MERCURY IN CHILDREN.—Dr. William Stephenson recently read a paper on the Action of Mercury (an abstract of a similar paper appeared in No. 17 of this journal) before the Medico-Chirurgical Society of Edinburgh, which is published in the *Edinburgh Medical Journal* for May, 1871. He thinks it is a very prevalent mistake to suppose that children are less susceptible to the constitutional action of mercury than adults. This mistake has arisen from the fact that young children are rarely, if ever, salivated by mercury, while all its other constitutional effects are ignored. A careful observation will show that in children the constitutional effects are more rapidly produced than in the adult. In syphilitic children, for instance, its action is sometimes exceedingly prompt. So, too, the depressing effects of mercury are sooner produced in the former than in the latter, and among these anæmia is especially prominent. In many cases he believes that mercury acts by a direct effect upon the cell elements of the tissues themselves, stimulating their action in the various transformations through which they normally pass. This action of the remedy may be carried too far, producing proliferation of cell elements and degeneration in the ultimate products. The state of the constitution is to be considered. Mercury should not be given whenever there is marked cachexia present. Dr. Stephenson has found that it manifests its good effects in the sluggish constitutions of the strumous and syphilitic diatheses much more than in the active cellular transformation of the tubercular class, in which also its irritative and depressing influence is much more readily produced. In the treatment of specific affections in children, it is to be recollected that the diathesis can never be eradicated, and that all we can do is to modify the diseased action dependent upon this. Mercury, he says, will cure the syphilitic diseases of the first year of life, but no extent of its use at that time will lessen the tendency in after-years to interstitial keratitis, or any later manifestation of the taint.

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NEW BLOOD-CRYSTALS.—According to Dr. Preyer (*The Academy*, April 1, 1870, from *Chemisches Centralblatt*, No. 7, 1871), the addition of an equal volume of ether and a little glacial acetic acid to an aqueous solution of blood, from which the chlorine has been removed by argentic nitrate and subsequent filtration, or to an aqueous solution of pure hæmoglobine, causes the ethereal layer to turn dark brown and to exhibit four absorption bands, one between C and D (the acetic-acid band), which lies close to C, a very weak one near D, a strongly-marked broad one at E, and another strongly-marked broad one between B and F. A similar spectrum, first observed by Stokes, is also given by hæmatine that contains no iron. Preyer has found that the coloring-matter of the above solution can be crystallized, if the ethereal layer from the colorless hæmoglobine solution or the blood freed from chlorine be separated very slowly, evaporated, and finally dried over potash solution. The crystals are for the most part acicular, frequently contorted, sometimes in stellar aggregation, sometimes detached. The majority are finely pointed; many show jagged edges. They doubly refract light, surpass in size all other blood-crystals, are insoluble in ether, alcohol, or water, but readily dissolve in potash solution of aqueous acetic acid, and can be recrystallized from the last-named menstruum. They are not identical with hæmine or hæmatoidine, nor, apparently, with Lehmann's hæmatin crystals. They have received the name of *hæmatoine*.

CONTRACTILE GLAND-CELLS OF THE SKIN OF THE FROG.—The following are the results of the observations of Dr. T. Engelmann on this subject (*The Academy*, April 15, 1871, from Pflüger's *Archiv für Physiologie*, January, 1871). Contractile glands are very numerous, and are distributed over the whole surface of the skin of the frog. They are distinctly contractile under nervous excitation, and are composed of basement membrane with a lining of cells, which are arranged in two layers,—an external, flat, and probably contractile layer, and an internal layer of more cubical form. The two layers are not very readily separable from each other. Prof. E. found that momentary mechanic or electric excitation of the distal extremity of the divided nerve causes temporary contraction of the glands of the hind feet, which attained its maximum in from half a second to five seconds. If the shocks be repeated with sufficient frequency, the glands, or rather the gland-cells, appear to pass into a state of tetanus, and they then assume a cloudy appearance. Independently of direct excitation, the contraction of the gland-cells may be called into play reflectorially, as by irritation of the nerves of various parts of the body. The reflex irritation is conducted centripetally through the posterior, centrifugally through the anterior roots of the spinal cord. The activity of the motor nerves is not abolished by woorara.

MISCELLANY.

THE UNIVERSITY HOSPITAL.—The friends of the University of Pennsylvania have lately issued an appeal on behalf of the hospital which it is proposed to connect with the medical department of that institution, and have held a meeting for the purpose of forming an organization, the object of which is to promote the effort which is being made to collect such a sum of money as will insure not only its erection, but also its endowment. Dr. George B. Wood, already a most generous benefactor of the University, has signified his intention of contributing ten thousand dollars, and many other gentlemen, it is understood, intend to respond liberally to the appeal.

The corner-stone of the new buildings for the Department of Arts was laid, with appropriate ceremonies, at Thirty-fourth and Locust Streets, on Thursday, June 15, and it is the intention of the Trustees of the University that the buildings for the medical department and for the hospital shall be upon the same lot. The importance of thorough clinical instruction is fully recognized by both our medical schools, and no city in the United States presents greater advantages in this respect than Philadelphia.

A STEP IN THE RIGHT DIRECTION.—The Faculty of the Medical Department of Harvard University have adopted the rule that hereafter candidates for the doctorate must have attended lectures for three years. During each year only a partial course of study is to be required, and the student is to be examined at its close upon the lectures he has heard. Although the Harvard school may at first suffer a falling off in the number of its students, the ultimate effects of this change will be to increase its popularity as well as its influence.

A friend has sent us a copy of a correspondence between the Secretary of the Philadelphia Hospital Medical Society and the Dean of the Medical Faculty of Harvard, the former transmitting to the latter some congratulatory resolutions of the Society in reference to the change.

EDITORIAL CHANGE.—The June number of the *New York Medical Journal* contains the announcement of the retirement of Dr. Edward S. Dunster from the editorial charge of the journal. During the five years that Dr. Dunster has been its editor the journal has been managed with much ability. His successors are Drs. William T. Lusk and James B. Hunter, who "bring to their labors a ripe experience and qualifications of a rare order."

THE MEDICAL WORLD.—A monthly journal with the above title, under the editorial charge of Dr. Reuben A. Vance, is soon to be published by Messrs. William Baldwin & Co., at $1.50 per annum. It is to be made up partly of extracts from all the leading foreign and American periodicals, and partly of original communications. Messrs. Baldwin & Co. have recently become the publishers of *The New York Journal of Obstetrics and Diseases of Women and Children*.

GRAEFE'S SUCCESSOR.—Prof. Schweigger, a pupil of the late eminent ophthalmologist, has just been appointed to succeed Graefe at the Charité Hospital of Berlin. Dr. Schweigger has hitherto occupied a chair in Zurich.

MISS JEX BLAKE SUED.—It will be recollected that Miss Blake asserted recently, in a speech delivered before the Contributors to the Edinburgh Infirmary, that Mr. Edward Craig, Dr. Christison's assistant, was one of the ringleaders in the disturbance which took place last November upon the introduction of female students to the Surgeons' Hall, and that he was under the influence of liquor at the time. From the *Lancet* of June 3 we learn that Mr. Craig has sued Miss Blake for defamation of character, and that a verdict has been given in his favor. The damages assessed were one farthing,—from which we may infer that, while Miss Blake is convicted of having said what was not true, the jury thought that nothing she could say was likely to affect Mr. Craig's character unfavorably.

CLINICAL TEACHING AT BERLIN.—A writer in a recent number of the *British Medical Journal* thus describes Professor Frerich's method of conducting his *clinique*:

"It is conducted in one of the theatres of the Charité, three or four times a week, in the following way: A patient is rolled into the arena from the adjoining ward on a bed, and one of the students named *Practicanten*, who have put their names on a list for the purpose, is called down. The history of the case is read to him and to the class, and he makes a physical examination of the patient, assisted by the professor, and then forms his diagnosis. The professor then analyzes the case in

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every direction, in a way peculiar to the German school, and which we have never heard equalled by any other teacher, except the lamented Oppolzer; and from this it is that the English student derives benefit: there he finds the most ordinary everyday cases looked at in other aspects than that in which he has been accustomed to regard them, and the diagnosis arrived at by processes of reasoning quite new to him.

"Prof. Traube's clinique is conducted more in accordance with our ideas, inasmuch as he goes round his wards with the class. He gives two courses,—one intended for the junior students, the other for senior students and foreigners. Traube's specialty is diseases of the chest, and he possesses the most acute powers of auscultation. His ears are habitually stuffed with wadding, in order, it is said, to preserve the membrana tympani in perfect order."

A New Treatment for Scurvy.—From the New York *Tribune* we take the following: "There is rarely anything new in the medical way,—or in any other way, for that matter. A paragraph relates how, 'out West,' wherever that may be, six men, to cure them of scurvy, were planted in the ground, when a pack of wild beasts ate the six heads off. But semi-burial for scurvy is a very old practice, and the earth-cure was discussed in England many years ago, and was funnily caricatured by *Punch*. The botanical practice is also ancient: —there is an amusing chapter on it in Southey's 'Doctor.' As for bleeding and quicksilver, they are as old as Paracelsus, and probably much older; and poor man will doubtless be depleted to death until time itself shall be no more."

Doctors and their Fees in the "Good Old Times" in Ireland.—The *Medical Times and Gazette* says, "The following curious mode of providing for the payment of the medical profession prevailed in Ireland under the Brehon laws prior to the thirteenth century. In an interesting address delivered to the Law Students' Debating Society of Ireland, December 6, 1869, by John B. Falconer, A.B., it is stated that—'A law in relation to doctors enacted that their fees should be proportioned to the rank of the patient and the nature of the complaint. It was also held that no fee should be paid unless a cure were effected. On the other hand, the fees seem to have been sufficiently large; and as the method of treatment must necessarily have been less scientific than at present, and the habits of life more simple, perhaps deaths did not occur so frequently (*sic*) from disease as at present. Fourteen *cumhals*, or forty-two cows, for example, were the fee for curing a bishop or local chief, while the health and bodily welfare of a member of the lowest rank of the tribe were valued at six cows.' This standard of value—viz., per cumhal, or three cows—was the origin of the expression, 'So much land as follows three cows,' and is explained by the then patriarchal state of society."

An Odd Definition.—The proprietor of a little ale-house in Scotland having on his sign-board, after his name, the letters "M. D. F. R. S.," a physician, who was a Fellow of the Royal Society, asked him how he presumed to affix these letters to his name. "Why, sir," said the inn-keeper, "I have as good a right to use them as you have." "What do you mean, you impudent fellow?" replied the physician. "I mean, sir, that I was Drum-Major of the Royal Scots Fusiliers."

Comprehensive Specialism.—Under this head the *Nashville Journal of Medicine and Surgery* reproduces the following advertisement:

"Marshall L. Brown, M.D., Physician and Surgeon, Winchendon, Mass. Office hours, 2 to 4 and 7 to 8½ P.M. Especial attention paid to all diseases flesh is heir to. Also, attention paid to diseases of horses."

An Alleged Insult to the Profession in Italy.—The *British Medical Journal* says, "According to the Italian medical journals, one of the provisions of a penal code which is about to be presented to the parliament of the country is that fines shall be inflicted on physicians and surgeons who refuse to render professional service in cases of emergency. Our contemporary, *L'Imparziale*, protests against this, and says that, while it is undoubtedly the moral duty of medical men to give their aid in urgent cases, no civil or penal law ought to impose this duty on them as an obligation, or to threaten with punishment those who refuse to perform it; that medical men, not bound by public appointments, neither can nor ought to be compelled to render assistance to every comer; and that to force them to do this would be making slaves of them."

Mortality of Philadelphia.—The following reports are condensed from the records at the Health Office:

	For the week ending June 10.	June 17.
Consumption	34	38
Other Diseases of Respiratory Organs	29	14
Diseases of Organs of Circulation	22	9
Diseases of Brain and Nervous System	39	50
Diseases of Abdominal Organs	54	49
Zymotic Diseases	22	12
Debility	27	30
Marasmus	6	11
Cancer	4	10
Syphilis	0	1
Scrofula	1	2
Tetanus	0	1
Old Age	10	5
Stillborn	15	19
Malformation	2	0
Casualties	12	10
Sunstroke	2	0
Suicide	0	3
Murder	1	0
Intemperance	1	5
Unclassifiable	11	11
Unknown	0	3
Totals	292	283
Adults	142	136
Minors	150	147

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 5, 1871, TO JUNE 18, 1871, INCLUSIVE.

Gibson, Jos. R., Assistant-Surgeon.—By S. O. 62, Headquarters District of New Mexico, June 1, 1871, relieved from duty at Fort Stanton, N.M., and directed to comply with requirements of S. O. 190, c.s., War Department.

Brooke, John, Assistant-Surgeon.—By S. O. 71, Headquarters Department of the Columbia, May 27, 1871, assigned to duty at Camp San Juan Island, Washington Territory.

Cowles, Edward, Assistant-Surgeon.—By S. O. 224, A.G.O., June 5, 1871, granted leave of absence for six months, to take effect when his services can be spared.

Kinsman, John H., Assistant-Surgeon.—By S. O. 25, Headquarters Military Division of the Atlantic, June 1, 1871, granted an extension of his leave of absence for 30 days.

Wilson, A. D., Assistant-Surgeon.—By S. O. 100, Headquarters Department of the Platte, June 8, 1871, directed to proceed to Fort Fred. Steele, Wyoming Territory, for temporary duty at that post.

Ewen, Clarence, Assistant-Surgeon.—By S. O. 114, c.s., Headquarters Department of Dakota, granted leave of absence for 30 days.

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THE MEDICAL TIMES.

SATURDAY, JULY 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TWO CASES OF ALBUMINOID DISEASE OF THE KIDNEY,

WITH REMARKS ON THE PROPER APPLICATION OF THE TESTS FOR THE DETECTION OF ALBUMEN IN THE URINE.

BY JAMES H. HUTCHINSON, M.D.,

One of the Physicians to the Pennsylvania Hospital; Vice-President of the Pathological Society.

GENTLEMEN: I shall bring before you this morning two cases illustrating a form of Bright's disease which, if I may judge from my own experience, is very common, for during each term that I have served as Attending Physician to this Hospital I have had under my care two or three patients affected with it. Its prominent features, however, do not seem to be so thoroughly familiar to students, or even to physicians, as they ought to be. I allude to the form in which the kidneys, usually in common with the other viscera, have undergone the albuminoid degeneration.

Before reading the notes of the cases, it may be well to remind you that the kidneys are composed essentially of three elements: 1, the secreting tubules; 2, the interstitial tissue; and, 3, the blood-vessels. Now, a morbid process may affect either one of these tissues alone, and may remain fixed in it throughout its whole course, or it is possible that a diseased condition which has originated in one may subsequently invade one or both of the others. As the symptoms presented in cases of disease of the kidneys depend, to a certain extent at least, upon the elements involved in it, there should, as a general rule, be no difficulty in determining the seat of the lesion; but to do this it is necessary not merely to obtain an accurate history of the case under consideration and a detail of the symptoms which it presents, but also to subject the urine to careful microscopical and chemical examination. The microscopical examination must of necessity be made elsewhere; but I propose to show you the chemical tests for determining the presence or absence of albumen in the urine. These chemical tests are very accurate if carefully applied, but if carelessly used they may lead you into the mistake of declaring that no albumen is present in urine in which it exists in large amount, or vice versa.

Case I.—P. M., æt. 16, born in Ireland, factory-hand, was admitted March 1, 1871.

He states that his parents were both healthy,—his father having been drowned while he was yet young, and his mother being still alive. Of ten children, his brother and himself are the only survivors. He can tell us very little in regard to his brothers and sisters, except that they died at a very early age and before his parents came to this country. His health seems to have been excellent until his eleventh year. At this time, however, "lumps" formed at the angles of the jaw, over the junction of the clavicle with the sternum, in both groins, and in the left axillary region. These lumps, he says, after a varying period of time, softened, ruptured, and discharged their contents, cicatrization taking place after, in some instances, a prolonged suppuration. His legs began to swell two months ago.

On admission, the lower extremities are œdematous, the left most markedly so, possibly in consequence of the greater number of cicatrices in the inguinal region of that side causing an obstruction to the venous circulation. There is œdema of the penis and scrotum. The abdomen is somewhat distended; no ascites, however, can be detected. In the left lumbar region there is a sinus, from which is discharged a small quantity of thin pus. There is no enlargement of either liver or spleen. The teeth are well formed, and there is no evidence that the patient has ever had interstitial keratitis. No disease of the lungs or heart. The urine is nearly normal in quantity, acid in reaction, has a specific gravity of 1013, and throws down a precipitate upon the application of heat and nitric acid. The microscopical examination shows the presence of a large number of hyaline casts, containing very few cells and scattered oil globules.

At the present time the boy's condition is not so good as when admitted. The dropsy has invaded all parts of his body, and pitting is now very readily produced over the sternum. Moreover, the dropsy persists, and has increased in spite of a tolerably free secretion of urine.*

Case II.—E. T., æt. 31, single, Irish, seaman, admitted March 17, 1871. Has no hereditary tendency to disease. His father died at 68. His mother is still living, and is healthy. Two brothers died young, but he has two sisters alive, both of them healthy. His own health he says was good previous to 1867, at which time he had an attack of acute articular rheumatism. In 1867 he also contracted syphilis, and in 1868 had secondary symptoms. Large cicatrices, three inches in diameter, on the anterior surface of the legs, mark the situation of ulcers which occurred about this time. These ulcers remained open for some time, during which a large amount of pus was discharged from them. He did not place himself under the care of a physician, but put himself on a treatment recommended by his friends.

In 1869 he had repeated attacks of sore throat, and at about the same time lost nearly all his hair, which, however, soon grew again. His legs began to swell March 2, 1871, after exposure about a week previously to wet and cold. The œdema has been increasing ever since.

On admission, his legs, thighs, and scrotum are very œdematous, the latter being quite as large as a child's head at term. There are cicatrices on the anterior surfaces of both legs, and also on the right forearm and the left knee. Smaller scars are also to be seen on the crown of the head and on the forehead, all of them resulting from ulceration dependent most probably upon constitutional syphilis.

The proper tests showed the presence of a large amount of albumen in the urine, estimated at about one-tenth. Whole quantity of urine passed in twenty-four hours, thirty-five ounces. Reaction acid. No tube-casts seen when the urine was examined under the microscope. A few leucocytes were, however, to be seen, in some instances grouped together.

Ordered Basham's Mixture and good diet.

March 23.—He has been passing a very small amount of urine lately. Ordered an infusion of scoparium.

March 26.—One hundred and forty-six ounces of urine, by actual measurement, were passed during the last twenty-four hours.

April 11.—The dropsy has very much diminished, in consequence of the increased flow of urine which has been kept up to the present time. Amount passed during last twenty-four hours, sixty-seven ounces; very albuminous. Reaction acid. Specific gravity 1013. The urine deposits, upon standing, a scanty white sediment. Microscopical appearances the same as those already noted. No tube-casts have ever been seen.

I shall now proceed to demonstrate that the urine really does contain albumen. There are, as you are aware, two tests for the detection of this substance in the urine; neither of them, however, should be relied upon to the exclusion of the other. One consists in the application of heat to the urine; the other, in the addition of nitric acid to it. It should, however, be recollected that the phosphates are also thrown down by heat, and that uric acid is precipitated by nitric acid; but the uric acid is dissolved by boiling, and the phosphates by the acid. These are sources of error with

*This case having already been reported in this journal, in the Proceedings of the Pathological Society, its history is compressed as much as possible.

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which you are doubtless familiar; there are others, however, not quite so well known, which have been recently pointed out by Beale. These are,—first, that albumen is soluble in urine to which too little acid has been added; and, secondly, that it is soluble in urine into which too much acid has been poured. Thus, if I allow a single drop of acid to fall into this test-tube containing urine, a precipitate will fall, which will instantly be dissolved upon shaking the tube. In the same way, if I add a large amount of acid to the urine, the copious deposit which at first falls will afterwards disappear. You may well ask me, what is the value of a test which may fail to detect the presence of albumen under two circumstances which are so likely to happen? The test, notwithstanding this, is valuable, and with proper care even small amounts of albumen may be detected by it. The proper application of the test is as follows: About a drachm of urine should be placed in a test-tube, and, while this is held in a slanting position, about fifteen drops of nitric acid should be allowed to trickle along its side. This, of course, being of greater specific gravity than the urine, will go to the bottom, and coagulation of the albumen will take place just at the line of junction of the two liquids. You see this dense white precipitate in the position where I told you it should be. I will also call your attention to an appearance of the precipitate which is characteristic. I refer to the sharply-defined borders which it possesses. Had the urates been in excess in this specimen of urine, and had uric acid been thrown down by the acids, the precipitate would have occupied a higher position in the liquid, and its upper border would not have been so sharply defined as you see that it is in the present instance; in fact, it would have presented rather a shreddy appearance. The test by heat requires fewer precautions in its application. Before having recourse to it, however, it is well to satisfy yourselves that the urine is acid in reaction, as heat will not coagulate albumen in alkaline urine. Apply the heat to the upper part of the liquid; the precipitate is then readily detected, as the urine below remains unchanged. The precipitate which is now thrown down I believe to be albumen. I will, however, add to it a few drops of acetic acid. The acid has no effect upon it, which shows that it certainly is not composed of the phosphates, as these are soluble in the acid, and demonstrates almost positively, when taken in connection with the results of the other test, that the urine contains albumen.

The amount of albumen in the urine may be estimated approximatively by allowing the precipitate thrown down by heat to settle to the bottom. This was done in both the cases on their admission into the hospital, and in both the precipitate was estimated at from one-eighth to one-tenth of the bulk of the urine.

These cases have certain features in common. Thus, in both of them dropsy, accompanied by an albuminous condition of the urine,—which is in one case not diminished in amount, and in the other is very much increased,—is a very prominent symptom. Their histories present also a point of some interest, and that is the long-continued suppuration which preceded the appearance of the dropsy. In the first case, you will recollect, there was a discharge from various parts of the body, in consequence, probably, of scrofulous disease of the lymphatic glands; in the second, it was kept up by syphilitic ulceration. Now, both of these—1, the persistence of dropsy while the secretion of urine continues free, and, 2, the long-continued suppuration which preceded its appearance—are capital points in the diagnosis of this form of disease of the kidney. It is a popular opinion, held also to a certain extent by the profession, that diseases of the kidney giving rise to dropsy are almost invariably accompanied by a diminished flow of urine, the effusion into the cellular tissue of various parts of the body being simply dependent upon the increased pressure within the blood-vessels caused by the diminished excretion of water. Without, however, denying that the dropsy may be thus explained in some cases, it is obvious that there are others which do not admit of this solution, and in which another explanation must be sought. In the beginning of my lecture I drew attention to the fact that the symptoms presented by diseases of the kidneys varied very much, and were, to a certain extent at least, dependent upon the tissue principally involved. In the cases before you, I believe that the vessels are principally involved, and I will state as briefly as possible my reasons for thinking so.

In the first place, the history favors this view. In the majority of the reported cases of albuminoid disease—and these are examples of that form—there has been at some time or other in their course more or less profuse suppuration. In the second place, the persistence of the anasarca, notwithstanding the large amount of urine voided, points in the same direction, and indicates that the coats of the blood-vessels, not merely in the kidneys, but in every part of the body, have undergone a degeneration which allows their liquid contents to pass more readily through them than in health. In the third place, the chemical and microscopical examination of the urine, especially the latter, is also in favor of this view. In one case—the second—the appearances under the microscope are not quite so definite as I should like to find them, but in the first they are almost diagnostic. It will be remembered that large numbers of very pale hyaline casts were seen; these casts are almost free from cells, and most of them are free from oil. I am, of course, aware that in some cases even of the acute form of Bright's disease the urine may contain hyaline casts, but it never does so without containing at the same time a much larger number of epithelial casts. The small amount of oil present in the casts shows the presence of commencing fatty degeneration of the epithelium of the uriniferous tubules, but does not indicate that this is the principal lesion in the kidney. It is scarcely probable that in patients of the ages of these two the disease is of the variety which is generally called cirrhosis of the kidney,—a diagnosis which, moreover, is not borne out by the symptoms.

I have not time to go fully into the differential diagnosis of this affection. In the second case, it is true, there is a history of an acute commencement after exposure to wet and cold; but I am inclined to think that this is only the apparent commencement, and that disease of the kidney has been latent for some time. I believe, therefore, that tubular nephritis exists in the case only as a complication.

I have pointed out the importance in a diagnostic point of view of the history of long-continued suppuration in both of these cases. The frequency of antecedent suppuration was, I believe, first pointed out by Dr. Dickinson, of London, who has based a very ingenious theory upon it, which is substantially as follows: Pus contains the alkaline salts in relatively larger quantity than the blood, and, consequently, profuse suppuration cannot long continue without inducing an alteration in the chemical composition of the blood, and, as a necessary consequence, in that of the tissues; and this, moreover, he thinks he has demonstrated, for he says that an analysis of any organ affected with albuminoid disease will always show that it is deficient in the alkaline salts. Corroborative of this view is certainly the action of iodine upon parts diseased in this way. In a healthy organ, as you are aware, the brown stain left by the application of Lugol's solution immediately passes into yellow, but in the diseased it remains permanently brown in those parts in which the degen-

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eration is most marked, unless soda or potassa be afterwards applied, when the same reaction as in health occurs.

I am not quite prepared to accept Dr. Dickinson's explanation of this apparent connection between long-continued suppuration and albuminoid degeneration. I may say, however, that the same association has occurred in all the cases I have ever had the opportunity of observing.

In regard to the prognosis, I think the cases differ. In neither case is there a prospect of a cure being effected, but in the second there is great probability that life may be prolonged for some years. It is most likely that the disease has not advanced very far, and that the dropsical symptoms which were at the date of admission prominent were due in large part to the intercurrent nephritis which I believe to have been present. A moderate amount of albuminoid disease of the kidney or of any other organ is quite compatible with comfort and even continuance of life for some years; for I have had cases under observation in which the disease has lasted for at least five years. In Case I. the prognosis is much more unfavorable. The increasing dropsy, the evidences of effusion into the serous cavities, and of œdema of the lungs, all point towards a speedy termination of the case, and I should not be surprised at the death of the boy in the course of a few days.

The treatment of these cases differs from that usually employed in other forms of Bright's disease. There is, of course, no indication to increase the flow of urine, for it is already sufficiently free, and the dropsy which is present depends simply upon the condition of the coats of the blood-vessels, which allows the ready passage of serum through them. The indication is rather to endeavor to prevent the loss of albumen: and with this view I shall prescribe for both of these patients ten grains of gallic acid, four times daily, and for the older one, since he has a syphilitic history, ten grains of iodide of potassium, also three times daily. Of course good diet has been ordered for both of them. In the case of the boy we have a troublesome symptom to contend with, to which I believe I have not alluded. I refer to gastric irritability. This may be relieved in many cases by the use of lime-water, or by hydrocyanic acid and morphia, but in many cases it resists every remedy, and, by the vomiting it induces, undoubtedly hastens the fatal issue, especially when diarrhœa exists at the same time,—a coincidence which is by no means infrequent in cases similar to these. These symptoms depend probably upon the disease of the blood-vessels of the stomach and intestines.

ORIGINAL COMMUNICATIONS.

MEDICAL NOTES.

No. II.

BY JAMES E REEVES, M.D.,

Wheeling, W. Va.

II.—DIPHTHERIA.

IT would be a most difficult task to describe minutely the various phases of treatment which have been employed for the cure of diphtheria since its advent in 1857. At first, experimentation and great uncertainty constituted the rule and result of all attempts at treatment, and very many indeed were the missteps which were made before any degree of rational progress had been reached. In fact, so many errors were committed in treatment that now, in looking back over the field, I believe I do not misrepresent the truth when I say it is quite probable that much of the fatality of the disease during the years of its first appearance was directly owing to bad treatment,—purgatives, mercurialization, the indiscriminate use of caustics, pustulation with tartar emetic and croton-oil blisters!

I am very sure I shall never forget the barbarous use of a blister in a case of diphtheria which I witnessed in 1860, in the practice of a village physician of considerable pretensions,—a veritable M.D. The patient was a girl, fourteen years of age. The parotid and submaxillary glands were early engorged; the tonsils, uvula, and velum palati were red and swollen, and on the second day of the disease these parts were extensively dotted with patches of false membrane; and by the fourth day the fauces were completely involved, and the patient was in great jeopardy. I was now invited by the attending physician to see the case, and heard with surprise his proposition to blister the throat with a cantharides plaster. He hoped "by making the *outside* sore that the *inside* would get better." I tried to dissuade him from such practice, by explaining the tendency of abraded surfaces, howsoever and whensoever produced, to become speedily affected with diphtheritic exudation, and offered as a further reminder the fact that, independently of this danger, there was no evidence on record of blisters having been used to the relief of the patient. He insisted, however, that the blister should be applied,—that "the throat *must* be made sore from ear to ear." The more surely and quickly to accomplish his wish of "drawing the disease to the outside," as soon as the blister was raised he tore off the cuticle, and, by means of the *swab* used for cleansing the throat, actually plastered the raw surface with the poisonous secretions which the patient had expelled into the spittoon! In four hours from the date of this reprehensible performance the entire blistered surface was thickly coated with the characteristic deposit, and twelve hours later the patient was dead!

At the present time there is great unanimity among well-informed physicians concerning the treatment of diphtheria. The successful plan embraces both local and constitutional means, which, of course, must be varied in activity to suit the case; and thus suiting the treatment to the condition,—giving the patient the benefit of hygienic as well as medical treatment,—my own experience warrants me in declaring that there is no other equally dangerous disease more manageable, or which in a given number of cases more often result in recovery. The following plan I can confidently recommend to my readers:

1. Cleanliness. To diminish the media of infection, the body- and bed-clothing should be changed daily. The sick-room should be bare of unnecessary furniture, and especially of drapery, and, if possible, have an open fireplace, and a fire burning on the hearth or in the grate, if the weather is too cool to have the doors and windows thrown constantly open. There is not the least danger of "catching cold" in bed, if the patient is well clothed. Segregation of the sick is absolutely indispensable, and the bed should be so situated that the fresh air from out-of-doors may blow over it and thoroughly dilute the foul air of the room.

2. Feed the patient, allowing beefsteaks and animal broths and soups, boiled milk, with gruels, jellies,—any kind of nutritious food the appetite craves, including ice-creams, etc. When food can no longer be taken by the stomach, nutritive enemata—beef-juice, etc.—must be employed. These are usually well retained after one or two efforts at this mode of feeding.

3. For drink, ice-water in small quantity at a time, or, if there be much redness and swelling about the fauces, pounded ice in teaspoonful doses, iced milk, and stock ale *ad libitum*. The ale not only relieves the uncomfortable feeling in the throat and improves diffi-

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cult deglutition, but exhilarates the patient and gives support generally.

4. The success of the medical treatment depends very much upon its being begun early. If the bowels are constipated, they should be opened by the citrate of magnesia or other simple laxative. If, on the contrary, diarrhœa is present, then from three to thirty grains of the subnitrate of bismuth (according to the age of the patient), with prepared chalk and a few drops of strong tincture of cinnamon, should be given every three or six hours.

5. If the case has been ushered in with nausea and vomiting, and these troublesome symptoms continue, either a dose of the simple aromatic spirits of ammonia, or from five drops to a half-teaspoonful of "chloroform paregoric (℞ Chloroform., Tinct. Opii, Spirit. Camphoræ, Spirit. Ammon. Aromat., āā, fʒjss; Creasoti, gtt. iij; Olei Cinnamom., gtt. vij; Alcohol., fʒij; M.) in a tablespoonful of ice-water, should be administered every half-hour. If constipation exist at the same time, a stimulating enema should be employed.

6. If the glands are much involved, and the throat is hot and swollen, a warm wet cloth, folded on a piece of oiled silk, should be applied around the neck, and this method of local bathing and sweating continued without intermission until the symptoms are controlled or entirely give way.

7. Experience has abundantly satisfied me that the use of strong caustics is not advisable,—that in numerous instances they aggravate all the symptoms, and thus greatly endanger the patient. The tinctura ferri chloridi may be applied in full strength to the diphtheritic patches and to the surface around their borders, by means of a camel's-hair pencil; but even this practice I have generally abandoned during the last five or six years, and now content myself with gargles or the atomized spray of the chlorine and iron mixture (℞ Potass. Chlorat., ʒij; Acid. Hydrochloric. puri, ʒjss; Aquæ, ʒvij; Tinct. Ferri Chloridi, ʒi; M.) every hour or two when the patient is awake. At the same time this mixture may be internally administered, in the dose of from twenty drops to a teaspoonful, with or without a little simple syrup, every two or three hours, with the addition, if need be, of sulphate of quinia. Warm atomized inhalations of the chlorine and iron mixture, according to the above formula, promise, I think, the greatest hope in cases of diphtheritic croup.

It is remarkable how little complaint is made, especially by children, of sore throat, even when the attack is of a serious character; and for that reason the exudation is frequently overlooked by the parents until it is pointed out to them by the physician. It is not every patch, however, seen in the throat that is diphtheritic,—very far from it, indeed; and it may be charged that physicians are not always sufficiently careful in making the diagnosis to discriminate between the *true* and the *false* deposit.

8. Besides chlorine, iron, and quinia, diphtheria frequently requires alcoholic stimulants, administered with a bold hand, to sustain the flagging powers of life. We must not wait for symptoms of collapse before commencing the free use of wine and milk-punch. In no disease is there greater tolerance of wine and of the stronger alcoholic preparations than in diphtheria, and the guide to the amount in which these are to be employed is their effect in each case.

9. During the advanced stage of the disease the patient is in danger of fatal syncope, and should therefore be carefully guarded against physical exertion or sudden change to the erect posture. In other words, keep the patient quietly in bed.

10. The uncertainty of convalescence should not be forgotten. This period may be protracted for many weeks after the throat is entirely clear of the deposit. In cases of paralysis of the soft palate, the danger of choking should be constantly borne in mind. I have known one patient to die suddenly at the table from an attempt to swallow solid food. Should the paralysis involve the limbs, and vision also become imperfect, iron, quinia, strychnia, and *patience* will be required.

To quiet nervous restlessness, both during the course of the disease and the period of convalescence, bromide of potassium is worthy of the highest confidence.

(To be continued.)

A CASE OF TRAUMATIC TETANUS.

BY R. H. JOHNSON, M.D.,

Cincinnati, Ohio.

M. R., æt. 23, of nervo-sanguine temperament, a partner with his father in a wholesale and retail bakery and confectionery establishment in this city, had three fingers of his left hand caught under a drop-knife on the 10th of February, 1871. The flesh of the first phalanges of the little and ring fingers was almost wholly cut off without injury to the bones. The middle finger was cut transversely through the first joint, being held only by a little skin at the back. I immediately placed the edges of the wounds in apposition, and united them with annealed silver thread, but applied no dressing whatever to them, hoping in this way to obtain union by the first intention. This subsequently took place. The pain and hemorrhage ceased in a short time, and he returned home feeling quite comfortable. No undue inflammation resulted—no erysipelatous indications, and no pain—up to the 21st, eleven days from the date of injury.

On the morning of the 21st, feeling well, with my consent he took the morning train for Dayton. He stopped at Hamilton to transact some business, drank a glass or two of beer, and proceeded in the next train to Dayton. Late in the day he felt a little stiffness about the jaws, and could not open his mouth so wide as usual. Fearing lockjaw, he immediately returned home, and reached my office at eleven o'clock the same evening. He came in heated from fast walking, and expressed his fears of lockjaw. I endeavored to laugh his fears away, telling him he had taken a little cold, but ordered hydrate chloral, ʒj, to ʒiv simple syrup, and sent him home to bed. He left in a perfectly calm state of mind, and on the following morning returned in the same condition, neither better nor worse. Two hours after, I was summoned to see him, the messenger saying he was worse and in bed. My patient had undoubted *tetanus*. I ordered cupping, hot bath, belladonna plaster to spine, and continued the chloral. There was no opisthotonos, no fever, perspiration, or pain. Slight difficulty of deglutition on attempting to swallow fluids and remedies existed, but not the slightest apprehension. He talked calmly and cheerfully, and even laughed heartily. The jaws had become a little more closed, though not at all painful.

At my evening visit, found deglutition more difficult and somewhat painful. He felt better since the hot bath. Trismus was not complete, but well marked. There was no spasmodic action of the tongue, though there were slight spasms of the voluntary muscles, with commencing opisthotonos.

On the following morning Dr. Bettman was called in consultation, when to the treatment were added calomel and opium. The malady had meantime slowly but surely progressed, and now the opisthotonos was considerable, deglutition difficult and painful, with slight spasms, and pain at the epigastrium; the abdominal muscles and diaphragm were extremely tense and unyielding; in short, all the terrible phenomena of tetanus, except, as yet, convulsions, were in full force.

At my midday visit I ordered tobacco-leaves to be softened in hot water and applied over the whole abdomen.

At 4 P.M., Dr. George C. Blackman was called to meet Dr. Bettman and myself. We ordered extract calabar bean, the physostigma venenosum, gr. viij, in ʒj glycerine, ten drops every three hours, and continued the use of calomel and opium.

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At my night visit I ordered a large hot poultice of poppy-heads to the abdomen, instead of tobacco, and continued the other treatment.

The following morning, 23d, was called early to see the patient, and at nine o'clock met Drs. Charles Woodward and Bettman in consultation. Continued the physostigma in alternation with the calomel and opium.

At 4 P.M., met again Drs. Woodward and Bettman. All the symptoms were aggravated, and, though there were no indications of convulsions, it was evident the patient was failing hourly; he could swallow only with great difficulty.

At 11 P.M., the patient was chloroformed by inhalation, but was kept under its influence a few moments only.

At midnight, but for the spasms of the muscles of the throat on attempting to drink, no one to look at or converse with him would have thought anything serious the matter. Opisthotonos very slight. There were no pain and no spasms of the abdominal muscles, which had become considerably relaxed. He talked rationally and calmly; said to his father, who was holding a spoon containing ten drops of chloroform in water which I had just ordered, "Father, you will spill that medicine." He then took the spoon at my request, and attempted to swallow the contents, when, in an instant, he went into the most frightful convulsion I had ever seen, which continued about ten minutes. On recovering, and the mouth being cleared of foam, he addressed me in a long sentence, but no one could understand a word he said. He did not seem exhausted, but he had not fully recovered power of speech. It being now 1 A.M., 24th, I returned home. Calling early, I was informed that the patient died at half-past one o'clock,—half an hour after I left him,—without another convulsion, sinking quietly, and with his last breath clearly articulating, "*Ich bin gestorben*," (I am dying!)

I am decidedly of the opinion that the physostigma venenosum in this case exhibited its power in relaxing the abdominal and all the voluntary muscles, which were previously unyielding and hard as a board; also, perhaps, in causing the almost entire subsidence of the opisthotonos. This so far disappeared as to give the patient no inconvenience, and he could sit up straight in bed. Finally, it may also have been instrumental in averting the convulsions until the moment when, at my request, he attempted to swallow the chloroform.

Dr. J. F. Meigs, of Philadelphia, in a clinical lecture delivered in the Pennsylvania Hospital, September 11, 1869, on a case of hydrophobia, eulogizes the calabar bean in both these incurable maladies, tetanus and hydrophobia, as follows:

"Knowing that ether and chloroform and all the various narcotics have been repeatedly tried in vain in these cases, I determined to continue the calabar bean, the physostigma venenosum, which has been found in the last few years so useful in tetanus."

May it not be possible that had the physostigma been given in my case in larger doses, or by subcutaneous injection, the power of the remedy would have been more marked? Dr. Meigs, in his lecture and report of the case of hydrophobia above alluded to, says,

"On admission he was rational, but with a wild excited manner. Ordered one-half grain of extract of calabar bean, by the stomach, every three hours. Took four doses of the extract."

Finally, the following remarks of the same lecturer appear equally applicable to the case just reported:

"Nevertheless, gentlemen, it seems to me that the quiet and ease which this poor fellow experienced during the last sixteen hours of his life were owing to the action of the bean upon his nervous system. It had done for him what it had done for a considerable number of cases of tetanus,—it had unlocked the rigid contraction of the voluntary muscles; and we may hope that in some future case a more exact knowledge of the precisely accurate method of using this powerful and wonderful agent may yet enable us to master this most intractable and fatal disease."

FOREIGN BODY IN THE RIGHT BRONCHUS.

BY LORENZO HUBBARD, M.D.,

Post-Surgeon U.S.A., Camp Bidwell, California.

C. S., Co. A, 1st U. S. Cavalry, stationed at this post, called at the Post Hospital about a month ago, and stated that while playing with a *dime*, by throwing it up and catching it in his mouth, to please a child, he had accidentally drawn it into the windpipe. Supposing he was mistaken, I examined him critically as to the circumstances and present symptoms, and tried to convince him that the coin had found its way into the stomach. Nevertheless, he insisted that it was in the right lung, and that he could feel it resting nearly under the right nipple, and, moreover, on making a strong expiratory effort he could raise the coin to the glottis, where it was arrested by the distressing sense of strangulation to which it gave rise.

On applying the ear to the chest, the gurgling occasioned by the lifting of the coin when the air was forced past it in expiration was distinctly recognized, and also a grating sound, probably produced by the friction of the coin rising and falling in the bronchus during respiration.

Being satisfied that the coin was actually in the bronchus, and being convinced of his ability to disengage it at will from its resting-place, which was probably at the bifurcation of the bronchi, we determined to endeavor, if possible, to place it beyond his power to resist by any voluntary effort its passage into the fauces. To accomplish this, small doses of ipecac, repeated every ten minutes, were ordered to be given until slight vomiting should be produced, in the hope that the nausea preceding would induce a spasmodic expiration, and that in this effort the coin would be thrown out.

In this I was not disappointed; the very first effort at emesis was attended with a violent spasmodic cough and expiration, which caused the offending coin to be expelled from the bronchus, and to be thrown to the floor at a distance of several feet from the patient.

Judging from this case, it is not unlikely the "nickel coin" in the case reported by Dr. Baldwin, in the number of the *Medical Times* for April 1, was actually lodged in the bronchus, as first suggested, where it remained until the irritation, though apparently slight, was sufficient to induce a sudden spasmodic action of the lung, during which it was discharged.

Had the child been able to express as fully all the symptoms and circumstances as was Mr. S., probably there would have been no doubt as to the diagnosis of the case.

The history of these two cases proves quite conclusively that foreign bodies may remain in the bronchus at least, and possibly in the bronchial ramifications, for an indefinite period, without producing any very serious manifestations.

SUPERNUMERARY LITTLE FINGERS.

BY J. ROTHROCK, M.D.,

Wilkesbarre, Pa.

EXTRA digits are by no means a rarity. When removed, they sometimes show a wonderful pertinacity in growing again. Darwin instances one case in which they were amputated three times, and, for aught we know to the contrary, the power of reproduction was not even then exhausted.

Recently I was called to see a male colored child three months old. It was the unlucky owner of two supernumerary little fingers, the two terminal phalanges of which, with the joint connecting them, were perfect. The nails, even, were faultless. These supernumerary fingers were attached by a delicate pedicle about one-eighth of an inch long and one-sixteenth thick to the skin over the middle of the outer side of the proximal phalanx of each little finger. On snipping them off

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with my scissors, the bright arterial hemorrhage which followed showed that they were well nourished; in fact, the pedicle was simply made up of vessels and skin. The other child of the same parents had one supernumerary little finger, similar in location and in all other respects to those removed.

Mrs. T., a sister of the mother of these children, was born with a similar extra digit. She was the only one in a family of ten that evinced any tendency to polydactylism: yet two of her five children had each a supernumerary little finger. Neither of the fathers had any malformation, nor can the tendency be traced farther back than Mrs. T. In all these cases the remaining fingers and the toes were regular and normal. Hence the tendency to antero-posterior symmetrical malformation did not exist, or at least was latent. Little fingers were the only "sportive" element in the anatomy of the family. The whole subject is mysterious, so far as its active cause is concerned, but strangest of all is the fact that in the second generation the tendency seemed to have acquired fresh strength, for Mrs. T. and *two* of her five children each had one, while her niece and nephew (the only children of her sister who had the usual number of fingers) both had extra digits, and one of them had two. We are not yet ready to accept Mr. Darwin's explanation of these facts,—*i.e.* that it is a case "of reversion to an enormously remote, lowly organized, and multidigitate progenitor."

Prof. B. G. Wilder, of Cornell University, has written some able articles upon this subject.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. GROSS, MAY 27, 1871.

Reported by Dr. Ralph M. Townsend.

SYNOVITIS OF THE FOOT.

A. D. has been the possessor of a painful and swollen foot since last October, and an examination reveals the fact that the continual aching and throbbing are due to an inflammation of the extensive synovial apparatus connected with the tibio-tarsal articulation. She is forty-five years of age, and, although she states she never was sick, looks poor and emaciated.

There is no fluctuation, but marked thickening and distention of those parts of the sac where there is the least resistance. In these cases the swelling is generally greatest from the malleoli backwards towards the tendo-Achillis.

The treatment ordered was the application of cantharidal collodion, to be thickly painted with a camel's-hair brush over the whole articulation. The foot was then enveloped in flannel, wrung out of hot water, and covered with oiled silk. By such means the professor hoped to secure not only counter-irritation and vesication, but, by the bursting of the little vesicles, depletion also.

In a few days, pressure by means of the roller-bandage, from the toes up, will be applied; but meanwhile the foot must be kept in an easy, elevated, and relaxed position. This woman was also ordered to take twenty-five drops of the muriated tincture of iron and one-twelfth of a grain of the corrosive chloride of mercury, three times daily.

ENLARGED LYMPHATIC GLANDS.

W. M. has lumps in his throat, which he ascribes to taking Helmbold's Buchu! He is twenty-six years of age. Some pain exists in these swellings. His parents are healthy. The presence of decayed teeth in his lower jaw might account for these swellings, which are evidently enlarged lymphatic glands; but his lower teeth are sound, though some bad ones exist in his upper jaw.

The question of scrofula comes up in connection with this case; but it is not a necessary condition, as suppression of the cutaneous perspiration, disordered digestion, bad teeth, etc., may all bring about enlargement of these glands.

The first thing to be done with this patient is to regulate his diet; the second, to impress him with the importance of cleanliness to a swelling of this kind. Regarding the first, his diet should be nutritious, but perfectly plain and simple: hot water and bread being especially interdicted as the prolific cause of acidity and indigestion. Secondly, as a local application, hot water and soap, by their cleansing action, etc., are recommended. The following prescription was also given:

℞.—Ung. Hydrarg. Biniodid., ʒj;
Cerat. Simp., ℥ss.

M. et ft. unguent.

S.—Rub, night and morning, on the enlarged glands, a piece the size of a pea.

He will also take every fourth night, until his tongue becomes clean, the following pill:

℞.—Mass. Hydrarg., gr. iij;
Pulv. Jalap., gr. ij;
Pulv. Ipecac., gr. j.

TRAUMATIC ANEURISM OF THE POSTERIOR TIBIAL ARTERY—LIGATION.

D. W., an oysterman, aged 34 years, from Chincoteague Island, Va., while hauling a seine, nineteen years ago, was wounded in the calf of the leg by a fish known as the sting-aree, or sting-bull (Trachinus draco), which, with its spinous rays, inflicts painful wounds. The flow of blood following the wound was profuse. The hemorrhage, however, stopped under the application of a tobacco-quid and pressure; but he was afterwards confined to his bed for three months. The cicatrix, as large as a five-cent piece, is still plainly visible at the lower limit of the tumor. After this attack he seemed to recover entirely, and pursued his usual vocation of a fisherman up to last October. At that time he was chasing some hogs through the woods, and jumped a fence: his alighting upon the ground was immediately followed by a stinging sensation. Soon after the present tumor was noticed, which has been a source of continual pain since its appearance.

This tumor commences three inches above the inner malleolus, and extends four inches up the leg, involving its posterior surface, and being distinctly marked along its outer contour. There is distinct pulsation here, synchronous with the contraction of the left ventricle of the heart. There is an indescribable sawing or whirring sound within the tumor. The case must therefore be one of aneurism of the posterior tibial artery. Pressure on the femoral artery stops pulsation in the tumor; but the pulsation reappears with the removal of the pressure. The tumor is circumscribed and not diffused, a condition which commonly attends traumatic aneurism.

The history of this case is singular. If the original cause was the fish-sting, the absence of extravasation can be explained only by supposing that the wound in the artery had cicatrized and that the cicatrix had been subsequently ruptured by the jump. It is difficult to imagine, however, why ulcerative action has not set in before this. The overlying structures here are in a state of attenuation, and if this pulsation be allowed to progress, ulceration will take place, and the life of the man may be endangered. Operative procedures here might consist—

1. In the application of the tourniquet to the upper part of the thigh, compressing the femoral artery in Scarpa's triangle, and then incising the tumor, turning out its contents, and ligating the artery above and below the sac. Sometimes a part of the tumor may be dissected out. In the present instance, Prof. Gross stated he did not think he could so control the hemorrhage as to make the operation an entirely unobjectionable one.

2. The artery might be ligated in Scarpa's triangle, and in this way the formation of an occluding coagulum be invited. This is the Hunterian operation, and was suggested in the latter part of the last century for the relief of a popliteal aneurism. Four ligatures were applied, one being tied tightly, and the other three held loosely in reserve. The latter part of this operation has now become obsolete, one ligature sufficing.

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3. Instrumental compression, as suggested by the Dublin surgeons, by means of the clamp, properly covered, might be made use of, the pressure being gentle and intermittent.

4. Digital compression. The lecturer stated he had cured an aneurism of the superficial femoral artery in this way in a colored woman from Delaware. The first pressure was continued for thirty-six hours, but, the pulsation recurring, it was again continued for ten hours, and then the patient made an excellent recovery. Prof. Gross also stated that he had cured popliteal aneurism by forced flexion, the only position in which the present patient finds relief from his pain.

May 31.—This patient was again brought before the class. Since Saturday, forced flexion of the leg; with a gum-elastic ball placed in the popliteal space, has been tried, but it did not answer very well; and, as the weather is hot and the man's time valuable, the procedure was abandoned for the purpose of tying the posterior tibial to-day.

The plan of Mr. Guthrie, a celebrated army surgeon,—now dead,—was to cut through the calf-muscles directly down upon the artery. The objection to this operation is the extent or length of the incision, when the calf-muscles are thick, in order to get room to work when the surgeon comes down upon the artery. The advantages of this operation are,—first, the artery is more directly approached; and, secondly, there is less danger of bagging if blood and pus are poured out.

In tying the posterior tibial, there are to be avoided the internal saphenous vein and the venæ comites.

[The operation in the present case consisted in making an incision about four inches in length along the inner border of the tibia. The edge of the gastrocnemius muscle was then lifted up and the fibres of the soleus divided, by which procedure the posterior layer of the aponeurosis of the leg was brought into view. The free and careful division of the latter exposed the artery, surrounded by the venæ comites, which were of unusual size, the artery itself being also enlarged.

The immediate effect of the ligation was to arrest the pulsation in the body of the tumor,—a slight pulsation being still perceptible over the former cicatrix.

The parts were brought together by four interrupted sutures and supported by adhesive strips and a roller applied from the toes up.—R. M. T.]

INHERITED SYPHILIS OF ALÆ OF NOSE, SIMULATING EPITHELIOMA.

T. M., aged 11 years, has a mass of granulations upon the end of the nose. In January last he suffered from sore eyes, and the nose oommencing to inflame, a "blind medium" gave him something to rub on it, which caused ulceration.

He has scars on his forehead and the bridge of his nose, and his central incisor teeth are concave and undergoing progressive caries. There is no pain or bleeding in the nose, but there is a very offensive discharge. The boy has constant headache,—particularly at night. The ulcer is covered with a greenish-yellow scab, which gives the granulations the appearance of a section of cauliflower stuck upon the end of the nose.

To get rid of the scab, a poultice was ordered. Internally this patient was ordered two grains of the iodide of potassium and one-fifteenth of a grain of the corrosive chloride of mercury, in solution, three times daily.

May 31.—This patient's nose was better in a marked degree. The scab had all come away, and the granulations were touched with a solution consisting of one part of the acid nitrate of mercury to fifteen parts of water. The application produced some pain.

The boy still complained of headache.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, MAY 24, 1871.

Reported by Dr. Elliott Richardson.

CONVERGENT STRABISMUS.

THE patient, a little girl ten years of age, was the subject of this deformity in a marked degree. Prof. Agnew stated that the affection is frequently due to defective refraction or accommodation of the eye. Examination had been made in this case, and slight myopia found to exist; but on a close examination a deposit of lymph could be seen on the cornea of one eye directly in the line of vision, the result of keratitis following an attack of measles six or eight years ago. This, the lecturer stated, is also a frequent cause of strabismus, produced by efforts of the recti muscles to remove the opaque spot from the visual line. In this case both causes seemed to have acted, and he thought it questionable whether an operation would be followed by permanent good results.

As both internal recti appeared to be implicated, they were both divided. Compresses were then applied, and directed to be retained for forty-eight hours, to prevent œdematous swelling, otherwise apt to occur. At the end of this time they should be removed, for if longer retained they might prove injurious.

POPLITEAL ANEURISMS.

The patient was a man forty-one years of age, of American birth, a ship-carpenter, rather spare, but of good muscular development, dark complexion, and until within two years he has enjoyed excellent health.

Both parents are living, and no history of hereditary disease could be detected.

About two years ago, while working at his trade, he felt weakness in his knees, which he at first thought to be rheumatism, but on putting his hands down he felt a lump in each popliteal space.

On exposing the left leg, a prominence was seen occupying the popliteal space immediately behind the knee-joint and extending below it, measuring a little over four inches in length. This tumor moved with each pulsation of the popliteal artery, and was situated directly in the line of this vessel. When pressure was made upon the artery above this enlargement, the motion ceased, and on pressing upon the tumor it diminished in size. When, however, pressure was made upon the artery below this growth, it increased in size, became more tense, and the pulsations were more forcible. Auscultation revealed the presence of the "aneurismal murmur."

Occupying a corresponding position in the right leg, another tumor was seen, of the same character, but not larger than a walnut. These, from the patient's own account, came at the same time, that in the left limb growing more rapidly than the other. Prof. Agnew, in the course of his remarks, said that aneurism is usually due to atheromatous disease of the coats of the arteries, by which the resistance of the arterial walls is diminished, and on some sudden effort they yield to the force of pulsation; that it is limited by either one, two, or three arterial coats, or, in cases where all these are ruptured, by a structure the result of inflammatory deposit in the connective tissue surrounding the seat of disease. Internally the sac is lined with several successive concentric layers of fibrinous deposit, enclosing a red jelly-like clot, which is probably the result of post-mortem coagulation.

He then detailed the various methods which had been at different times applied for the cure of this disease, and said that the theories of all these were based upon the efforts of Nature towards a cure, which are sometimes sufficient, unaided by human means, to accomplish an obliteration of the sac by inflammatory changes.

Of these methods, the most highly-esteemed at the present time are the ligation of the artery on the cardiac side of the aneurism, far enough from the seat of disease to secure sound arterial tissue (Hunter's), and the use of moderate compression of the artery above the aneurism, partially cutting off the supply of blood to the tumor.

Prof. Agnew said that in the present case he would try the latter method, making compression by means of Bellingham's compressor. The patient's bowels should be opened the day before; the leg should then be carefully bandaged from the toes up, and two instruments should be applied,—one at the apex of Scarpa's triangle, and the other just below Poupart's ligament,—for the purpose of making alternate compression at the two points as often as the uneasiness of the patient should require it. The artery should not be entirely closed. Anodynes should be given when the patient becomes restless under the pain and restraint of this treatment. If the instruments become unbearable, resort should be had to digital pressure. Under this treatment a cure may be looked for in two or three days, but it may be delayed for six or seven days.

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June 7.—Treatment was commenced Thursday, May 25, at 11 A.M., by means of Bellingham's compressors, and continued without interruption until Saturday at 12 M., when digital compression was substituted, on account of the uneasiness with which the compressors were borne, and the difficulty in keeping up a uniform degree of pressure with them.

By Sunday morning, at five o'clock, pulsation in the tumor had entirely ceased. Opium was pretty freely administered during this treatment, and good food, with some stimulants, towards the latter part of the time, as the loss of sleep from the constant pain and necessary disturbance to which he was subjected weakened him considerably.

Compression of the right femoral was commenced at 4 P.M. Wednesday, May 31, digital compression only being used; and by 12 o'clock that night no pulsation could be detected in the aneurism, but the treatment was continued twenty-four hours longer as a precautionary measure.

The result in both cases has been very satisfactory.

The total duration of compression of the left femoral was sixty-five hours; that of the right femoral, thirty-two hours.

Much lancinating pain in the course of the arteries was experienced during the establishment of the collateral circulation, which commenced soon after compression was applied.

The enlarged arteries about the knees are now plainly seen beating beneath the tissues. The circumference of the left knee over the aneurism now measures 14⅛ inches; original measurement, 15½ inches. Circumference of the right knee, 13½ inches; original measurement, 13⅞ inches.

The man has been walking about for the past day or two, and is this day discharged from the ward.

The following is a list of those gentlemen, members of the University Class of 1870–71, who generously offered their services in the treatment of this case, and to whose intelligent care and patient efforts the very satisfactory result is in a great measure due:

Messrs. Valdivieso, Estrazulas, Longenecker, Ranck, Rea, McElvie, Sewell, Platt, Keating, Guiteras, Bruen, Yocomb, Huston, I. Smith, J. F. Smith, Healey, Slifer, Weldon, Parke, Bowen, Birney, Bradway, Irish, and Dr. Davidson.

The following gentlemen also assisted in the treatment of the aneurism in the right popliteal space:

Messrs. Keating, Guiteras, Rea, Bruen, Weldon, Huston, Ranck, Platt, Sewell, Valdivieso, Estrazulas, and Longenecker.

CORRESPONDENCE.

DOUBLE MONSTERS.

To the Editor of the Medical Times.

In your issue of June 15, page 332, I have read a very good description of the "Ohio twins," as they have been called, with observations on the general subject of double monsters, and references to several cases similar to the one under consideration.

Dr. Goodell has in this very interesting clinical lecture paid me a handsome compliment by referring to my papers on the subject of double malformations (*Diploteratology, Trans. Med. Soc. of the State of New York*, 1865, 1866, 1867, 1868), from which source he states that he has obtained most of the materials of his lecture. This communication is written to correct a few errors in regard to the number and character of the cases found reported in the literature of this special group of double developments.

Dr. Goodell says that I have, in the Transactions above referred to, given details of "*four* such cases, each one exactly similar to the specimen before you, with the single exception of the twist on its axis of the fused limb. A *fifth* is reported and illustrated by Ambrose Paré (*Les Œuvres, etc.*, Lyon, 1652, p. 652). The wood-cut of a *sixth* is given by Ulysses Aldrovandus (*Monstrorum Historia*, Bononiæ, 1642, p. 646). For a knowledge of the *seventh* I am indebted to the courtesy of Dr. Louis S. Stillé. . . . Just before entering this room, Prof. Joseph Leidy informed me that an *eighth* was born in Ireland: it lived a week, and was, after death, sold to the College of Surgeons in Dublin (*Todd's Cyclopædia of Anatomy and Physiology*, vol. ii. p. 317, fig. 146). The same gentleman also tells me that Rokitansky (*Lehrbuch d. Pathol. Anatomie*, 3d ed., p. 321, fig. 7) gives the figure of a similar case, but does not state where it occurred."

Now, in order to display correctly the literature of the group of duplex development to which the Ohio case belongs, it will be necessary to revise the above statement.

In my systematic essay upon Diploteratology, which for want of leisure still remains unfinished (two hundred pages of text and thirty-three lithographic plates, containing one hundred and twenty-six figures, is all that has thus far been published), I have described sixteen cases which belong to the same generic group as the Ohio case,—viz., *Ischiopagus*. The group is divided into the complete or symmetrical and the incomplete or non-symmetrical forms. The symmetrical ischiopagus is characterized by the union of two entire fœtuses in such a manner that their pelves form a common ring or basin, the right pubic bone of one individual forming a junction with the left of the other, and *vice versa* on the opposite side. The common axis of the symphyses pubes is at right angles to the common vertebral axis. The heads are situated at the distal extremities of the longitudinal axis of the compound body; the abdomens are fused; single umbilicus and funis; one bladder; two rectums; two sets of genitals; four pectoral and four pelvic extremities; vital organs normal and independent.

I have given details of eight cases (*Trans. Med. Soc. of the State of New York*, 1866, p. 242 *et seq.*) of symmetrical ischiopagi, differing from the Ohio case only in having four legs instead of three,—viz., Cases 25, 26, 27, 28, 29, 31, 32, 33, and 34. Dr. Goodell's *eighth* case, of which he was informed by Prof. Leidy, is the same as my Case No. 25, taken from Dr. Montgomery's article "On Double Monsters" (*Dublin Quarterly Journ. of Med. Sci.*, vol. xv., 1853, p. 263, pl. 1, fig. 2). Dr. M. states, in concluding his account of the case, "I may observe that this case is taken by Prof. Vrolik as the type of a class, 'Inferior Duplicity,' and the figure of it in my article 'Fœtus,' in the *Cyclopædia of Anatomy and Physiology*, vol. ii., fig. 146, is referred to by him as an illustration." In describing the skeleton, he refers to the Catalogue of the Museum of the Royal College of Surgeons of Ireland, vol. i. p. 148. Thus it appears that Dr. Goodell's eighth case will be found in my essay, and is one of the eight cases of *four-legged* ischiopagous children therein described.

The non-symmetrical forms of ischiopagus are divided into specific groups according to the development of the pelvic extremities. Those having three legs, one of which is always a compound limb, resulting from the fusion of two, are described under the title of *Ischiopagus tripus*; of this form I have given details of *four* cases,—viz., 35 to 38.

Dr. Goodell's *fifth* case, for which he refers to the works of Ambrose Paré, will be found cited in the *N. Y. State Med. Transactions*, p. 262, under the head of "Literature of Ischiopagus" (A. Paré, *Les Œuvres*, Paris, 1575, fol., p. 809). The bibliography of this group, notwithstanding the titles are as much abbreviated as possible, occupies the greater part of this page.

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The *sixth* case referred to by Dr. Goodell, of which he says a wood-cut is given by Aldrovandus (*Monstrorum Historia*, Bononiæ, 1642, p. 646), is copied from a wood-cut in Lycosthenes (*Prodigiorum ac Ostentorum Chronicon*, etc., Basileæ, 1557, p. 619). It is also copied by Licetus (*De Monstris*, 3d edition, Amsterdam, 1665, p. 113). I have translated a brief account of it, which will be found under Case 38 (p. 254 of *Transactions*), being one of the *four* cases with which Dr. G. credits me.

As far as my knowledge extends, the Ohio case is the only one of *Ischiopagus tripus* which has ever occurred on the continent of America, which fact renders it peculiarly interesting.

There is a form of non-symmetrical ischiopagus in which two legs only are developed, both being on the same side of the double body,—of course, anatomically. Each individual has one pelvic extremity, the single rectum, urethra, bladder, and genitals being joint stock, each member of the dual corporation having furnished fifty per cent. of the material in the organization of the company. This form I have designated *Ischiopagus dipus*, and I have described two cases of it, —viz., 39 and 40.

There is still another form, in which but one individual is fully developed, to the pelvis of which either a pair of legs, or a single fused leg, with double genitals, are attached. This form is denominated *Ischiopagus dipygus*, of which I have given two cases,—one human (Case 41), and one animal (Case 42).

Since the publication of that part of my essay relating to the generic group Ischiopagus, I have had an opportunity of making a personal inspection of a case of the kind, in a human female infant several months old, born in Millville, Tenn., and exhibited in New York City in 1868. Two well-developed additional lower limbs were attached to the pelvis of the child. Between the natural limb and the supernumerary one, on either side, were to be seen well-developed female genitals. I saw it urinate from both sides, beginning and ending at the same instant. There was but one anus and one bladder.

This case has been published in many medical journals, among which I will mention *The Richmond and Louisville Medical Journal*, July, 1868, *The Cincinnati Medical Repertory*, July, 1868, p. 202, and *New York Medical Journal*, October, 1868, vol. viii. p. 102.

The *seventh* case of ischiopagus, pointed out by Dr. Stillé, has escaped my notice. I have not seen an account of it in any of the numerous works which I have consulted, and therefore cannot feel warranted in placing it with the three-legged group before seeing either a figure or a description of it.

The case pointed out by Prof. Leidy, in the "Pathological Anatomy" of Rokitansky, may be a mere *typical* form, selected from either of the authorities above cited; and since Dr. Goodell says Prof. Rokitansky "does not state where it occurred," this would seem the most probable view of the case, corresponding with the Irish case, belonging to the Dublin College, selected by Prof. Vrolik as a typical form in his article "Double Monsters" in the "Cyclopædia of Anatomy and Physiology," and which Drs. Leidy and Goodell have both been misled in regarding as an additional case to those described in my work.

The greatest care is required in all bibliographical and statistical investigations relating to medical subjects, and especially when a period of several centuries is to be explored, in order that the same statement, case, or figure referred to or repeated in different works may not be mistaken for so many different cases. Having had some experience and much perplexity in this sort of work, and on this very subject, for many years past, I have written this note to assist all who are interested in obtaining the correct literature of this form of malformation.

The subject of double monsters is an extensive one, and requires a volume to treat it in a satisfactory manner. I have already transcended the limits proposed in this note, which is written in a kindly spirit, and with the hope that the subject will in future be regarded by the profession as less trivial than heretofore.

G. J. FISHER, M.D.

SING SING, N.Y., June 19, 1871.

BELLADONNA POISONING; RECOVERY UNDER THE USE OF OPIUM.—Dr. Oxley, of the Liverpool Infirmary for Children, reports the following case in the *British Medical Journal*, May 20, 1871:

A child, aged 7, took by mistake ʃj of liniment containing ʒj of powdered belladonna to fʒj of menstruum. She was seen eight hours afterwards. She had violent delirium; occasional fits of laughter; continual agitation of body; her pulse was rapid, weak, intermittent; pupils widely dilated, insensible to light; conjunctiva congested; mouth and fauces parched; speech indistinct. Treatment,—two doses of gr. x each of sulphate of zinc, given twenty minutes apart, produced emesis. ♏vii tinct. of opium were given at 7.30, 9, and 11 A.M., and at 1 P.M. ♏x. Half an hour afterwards she became quieter, and the pupils were perceptibly smaller. At 4 P.M., ♏x were again given. She slept from 6 to 8½ P.M., when the opium was repeated; the pupils were still widely dilated, and the other symptoms but slightly improved. In a short time she vomited, fell asleep at 9.30, and slept till morning, with the exception of an hour and a half, during which she was awake and partially conscious. In the morning she was perfectly sensible; ate heartily; pupils somewhat dilated. She was discharged on the third day, perfectly well.

MR. PAGET (*Lancet*, June, 1871, p. 777), in speaking of the influence of constitutional over morbid manifestations, says:

"No disease is so specific but that its signs may be confused or complicated with the things that are peculiar to the patient. Syphilis is a specific disease as sharply defined as any, but its course and appearance in a scrofulous man and in a gouty one are very different. Vaccination produces a well-marked specific disease; but in one patient it may be followed by inflammation of lymphatics, in another by eczema, in another by anything you please. But all these are due in only a minor degree to vaccination; they come out from the personal constitutions of the several patients disturbed by the vaccination, as they might have been by anything else producing some slight fever. This is not a mere question of doctrinal pathology. It is among the first necessities for success in practice that in the total phenomena of a disease observed in any patient you should be able to estimate what belongs to the disease and what to the man."

CHOREA TREATED WITH STRYCHNIA.—In a severe case of chorea, reported by Dr. Hayden (*Brit. Med. Jour.*, May 20, 1871), the patient, a girl twelve years of age, took the one-twentieth of a grain of strychnia in mixture three times a day. This treatment was continued until slight rigidity of the muscles at the back of the neck was observable, with the effect of moderating the contortions of the shoulders and trunk. She was afterwards put on half-drachm doses of the syrup of the triple phosphate (strychnia, quinia, and iron) three times a day. This produced the most beneficial results. A recovery was effected in about six weeks,—not a long time, when the severity of the case is taken into consideration.

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EDITORIAL.

THE MEDICAL LIBRARY OF THE PENNSYLVANIA HOSPITAL.

TWENTY years ago, the history of the Pennsylvania Hospital was narrated by one of the most honored representatives of the medical profession, at the most interesting period of its career, when it was just entering upon the second century of its usefulness.* It is not, therefore, our purpose now to dwell upon its charitable and beneficial characteristics, except in so far as they are connected with a sketch of the rise and progress of the library. We should have found it a task of considerable magnitude to trace the growth of the latter during a period of one hundred and ten years (1762 to 1871), carrying us back into the days of our colonial history, about fourteen years before the declaration of our national independence, but for the excellent state of preservation of the minutes of the Board of Managers, and the valuable assistance imparted by a copious alphabetical index of these minutes during the first half-century of the existence of the Hospital. Unfortunately, this index has been discontinued for nearly seventy years past. The Hospital itself was instituted in 1751, but eleven years elapsed before the gift of a single volume laid the corner-stone of the future library, Mr. William Logan, one of the Managers, on his return from Europe in July, 1762, bringing with him a recently-issued work on Materia Medica, by William Lewis, F.R.S.,—"a present to this Hospital by Dr. John Fothergill, for the benefit of the young students in physic who may attend under the direction of the physicians." Dr. F. was an early and steadfast friend of the institution, and during this same month contributed a number of framed anatomical views, models, etc., valued at £350. These were used to illustrate Dr. Shippen's anatomical lectures, and the name of the generous donor is therefore associated with the earliest study and teaching of anatomy in this country. This collection, as well as that of some curious anatomical waxwork purchased from the estate of Dr. Abraham Chovet in 1793 by life-annuity to his daughter of £30 (sterling),—the sum paid on this account amounting in all to $2658.88,—though seemingly unconnected with the history of the library, are incidentally mentioned here, more particularly "as the anatomical museum of which they laid the foundation was long connected with the library and drew its subsequent increase from the same fund."†

The subject of charging a fee for the admission of students to the privileges of the Hospital is interesting from its connection with the history of the foundation of the medical library. It was the custom in those days—up to 1821—to intrust the duties at present exercised by the Resident Physician to Apprentices,—in other words, medical students who resided within the hospital. The regulations adopted in 1763 required a fee from all students in attendance, except, of course, the apprentices; but the matter being first referred to the Attending Physicians, the latter, in a report signed by Drs. Thomas Bond, Thomas Cadwalader, Phineas Bond, and Cadwalader Evans, recommended that each student should pay six pistoles as a gratuity for that privilege. "And further," say these gentlemen, "as the custom of most of the hospitals in Great Britain has given such gratuities to the physicians and surgeons attending them, we think it properly belongs to us to appropriate the money arising from thence, and propose to apply it to the founding a medical library in the said hospital,"—which proposition was acceded to. The expenditures from the "medical fund" thus created and annually increased from this source are, it is presumable, still devoted to the purposes of the library.

In 1767, there were presented from the medical library of the late Dr. Lloyd Zachary forty-three volumes, and from that of the late Dr. Benjamin Morris, by his sister Deborah Morris, fifty-five volumes,—the latter the medical portion of a valuable collection of works procured by him while residing abroad. In October, 1770, two quarto volumes on Materia Medica were received from England, having been "transmitted by our friend Benjamin Franklin at the request of our worthy benefactor, Dr. John Fothergill, as a present from him." The Hospital seems to have had, almost from the outset, valuable assistance from friends and contributors in Great Britain. A continuance of the same kind influences in behalf of our local sick was again invoked in July, 1774, by direct appeal of a committee, addressed to William Strahan, of London, at the time of sending for a supply of medical works, which they were anxious to obtain before the winter. "This we are very desirous of, as the young students who from the neighboring provinces attend the lectures of the several professors in our medical schools may then have the benefit of reading them a year sooner than they can if they should not arrive here before the next spring." The "trunk of books" was received in December, and the gentleman addressed evidently took as a hint the statement of the committee that the Hos-

* An Address on the Occasion of the Centennial Celebration of the Founding of the Pennsylvania Hospital, delivered June 10, 1851, by Geo. B. Wood, M.D. Philadelphia, 1851.

† Sketch of the History of the Medical Library of the Pennsylvania Hospital. By William G. Malin, Librarian. Philadelphia, 1889. The writer of this article is also indebted to this gentleman, at present the efficient Steward, as well as to Mr. Alexander D. Stockton, Librarian, for facilities and courtesies extended in its preparation.

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pital "funds fall short some hundred pounds yearly of discharging our common expenses," for the books, valued at about a hundred pounds, appear to have been presented by him.

"The throes of the approaching Revolution," says Mr. Malin, "began now to be felt; and although, amidst the all-absorbing political excitement and convulsions which followed, the Managers continued an unremitting care to the main objects of the institution, it is not surprising that for some years no addition of importance was made to the library. At some periods, indeed, particularly during the years 1776–77–78, and during the depreciation in the value of continental money, it required great exertions to preserve the institution from total ruin. In the fourteen years between 1774 and 1787 inclusive, only ten volumes and a pamphlet were added to the library. The first order for books transmitted to London after the close of the Revolutionary War was dated June 30, 1786." One work purchased during the war, Cullen's First Lines of the Practice of Physic, cost, in 1780, the apparently extravagant sum of £135 5*s*. This was at a time when there was an enormous depreciation of the currency, and was really equal only to the inconsiderable amount of £1 15*s*. specie.

While the catalogue was in preparation in 1788, several volumes were found to be missing, and Samuel Coates was desired to advertise for them in Hall & Sellers' Gazette, and to request the persons in whose possession they were to return them. The Apothecary, who evidently acted as the Librarian in those days, was ordered under no pretence to loan a book without taking a note or sufficient deposit. The first systematic "Rules" for the use and preservation of the library were adopted in December, 1789; and it was at the same time determined that a catalogue should be printed, "under the inspection of Joseph Paschall and Bartholomew Wistar, who are requested to accept of the assistance of Drs. Rush and Parke, who offer their services in this business." This, the first catalogue, was issued in the spring of 1790, a copy being given gratis to each officer, Dr. Lettsom, and Dr. Redman, President of the College of Physicians, the students being each charged an eighth of a dollar for the same. The number of volumes embraced in it was 528. We learn from Mr. Malin's sketch, that "in the years 1787, 1788, 1789, and 1790, the amount paid for books was £266 5*s*. 11*d*., and the total expenditure in their purchase from the foundation of the library to the close of the official year (May) 1790 was £332 8*s*. 7¾*d*., or $886.48."

During 1790, the aid of the celebrated Dr. Lettsom was solicited by the Managers of the Hospital in the selection of works for the library abroad. He subsequently contributed many valuable medical books, and seemed anxious that "the library should contain a good proportion of the works of ancient as well as modern authors, and that they should be consulted by at least the writing portion of the profession."

In October, 1791, it was determined that, in addition to the facilities extended to its own officers, the President of the College of Physicians for the time being should be entitled to the use of the books.

Drs. Parke, Shippen, and Wistar were appointed, in January, 1794, a committee to report a plan for the better regulation of the library and the preservation of the anatomical specimens, but their report was not entered upon the minutes. In February, Jos. Paschall and Dr. Parke were appointed to prepare a catalogue of the new books, which was printed in August. The apprentices must at this time have had charge of the library, for we find Dr. Thomas Horsfield, one of these resident medical officers, who was about to leave the institution, called upon to give a list of the books missing from the library; and, still later, several of these gentlemen paid out of their own pockets for a few missing volumes, for the care of which they were held responsible.

The Managers, in March, 1800, resolved to petition Congress to exempt public libraries from the payment of import duties on books; but the petition was not offered, as Congress had in the mean time decided the question negatively. The library was removed during this year into the new room, specially prepared for it, on the first floor of the centre building, there not being room for it in the four cases it already occupied, and Drs. Parke and Barton were appointed the Committee of Arrangement. The library became in time so extensive that it not only filled the apartment designed for it, but also crept into the entry, and even invaded the domain of the Apothecary. This condition of affairs continued until 1847, when it was removed to its present commodious quarters on the second floor.

The only important donation of books during the year 1800 was received from Sarah Zane, who had come into possession of a large miscellaneous and medical library, the latter of which, including many rare books, she gave to the Hospital. It consisted of ninety-one quartos, twenty-three folios, twenty-two duodecimos, and six octavos. "It is curious to remark," says Mr. Malin, "the relative proportion of the several sizes, particularly as these works were nearly all published in the sixteenth and seventeenth centuries, and may perhaps be taken as a tolerably fair average of the form assumed by the medical literature of those times."

On every occasion when the care of the library was transferred from one apprentice to another, formal action was taken upon it by the Board of Managers. Each new acting Librarian was required to receipt for all the books, etc., a list of the missing volumes was prepared, and two of the Managers were appointed to superintend the transfer. It was quite a common—indeed, almost a universal—occurrence for the apprentices to be charged on leaving with the value of a large number of missing books. The records are full of such entries as "List of books lost before Dr. —— took charge of the library;" "Books lost under the care of Dr. ——," etc. Indeed, at one time it was ordered that the medical library be closed, to give the apprentice the opportunity "to stay a few days in the city, and devote time to collect all that are out," and to make a list of the books

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still missing, fifty copies of which list were to be distributed among the physicians and pupils, and one copy inserted in the public newspapers. In another place we read that the library is not to be opened until further orders, "as John Moore, who is appointed Librarian, must examine the books before he gives a receipt for them," fifty volumes being then missing, though many of these were afterwards recovered. In addition to such duty, the rules stipulated that "the apprentice acting for the time being as Librarian shall bleed, cup, and leech; he shall also dress wounds, and assist the senior apprentice in dressing fractures."

It may be interesting, now that the system of medical apprenticeship has been abolished for so many years, to refer briefly to the terms under which such an officer was received. He was to bring with him a single feather-bed, which he was to leave in the house, to serve five years, and give two sufficient securities to pay at the rate of a hundred pounds per annum for every day that he absented himself without leave from the Managers, to fill up his time in study, "to look for no indulgence by leave to attend parties of pleasure or places of amusement, nor to be abroad in the evening; nor will it be considered for his benefit to receive visits at home, none of these things making any part of the views of careful parents or friends in placing him, nor the Managers in receiving him, as apprentice." He was allowed two seasons—selected by the Managers—out of the five, to attend medical lectures, "always observing to return home as soon as each lecture shall be over." These reminiscences of those who for so many years had the responsible care of the library seem appropriate in a sketch of its history.

In 1806, a new catalogue—the first according to authors—was printed, under the superintendence of Zaccheus Collins and Richard Wistar, a committee of the Board of Managers, who were empowered to call to their assistance one or more of the physicians. Dr. Thomas Parke was selected, but Dr. Joseph Hartshorne, at that time an apprentice, is known to have had the chief labor of its compilation intrusted to him.

Nothing of interest occurred in connection with the library until 1816, when a committee was appointed to confer with the physicians, with authority to purchase such books from the library of the late Dr. Benjamin Smith Barton as they deemed desirable. The medical portion was found to be mainly composed of duplicates of books already in possession of the Hospital, but those on Natural History and Botany were purchased at a cost of nearly twenty-eight hundred dollars. During this year nearly £400 sterling were invested in the importation of books. In 1818, the second part of the catalogue was issued. In 1822, the first "Committee to have charge of the Library" was appointed, who were requested to associate with them Drs. James and Hewson in its care and superintendence. In 1823, over four hundred dollars were expended in the purchase of sundry books and instruments,—the effects of Dr. William Price; and a vote of thanks was passed to Dr. Parke, who had acted as purveyor to the library, £600 sterling having been at various times placed in his hands for the purchase of books.

The Library Committee was instructed in 1824 to remove such bookcases as were in the room on the second floor, so as to appropriate that chamber to the use of the Lying-in Department. In March of this year, Mr. William Gunn Malin was appointed Clerk, to whose duties those of Librarian were added the following year, continuing in this dual capacity until 1840, when he was appointed Steward,—in all of which positions he has faithfully and conscientiously labored for the best interests of the Hospital. In 1827, a committee was appointed to inquire the price, etc. of Mascagni's plates, but, as they were valued at five hundred and nineteen dollars, it was decided not to purchase them. In 1829, a new catalogue was prepared by the Librarian, with which was incorporated a "Sketch of the History of the Medical Library," by the same reliable authority. The latter publication gave so much satisfaction that one thousand extra copies were printed the following year. The catalogue numbered 5828 volumes, and a supplement to it was published in 1836.

Dr. Louis, of Paris, received, in 1833, the thanks of the Managers for valuable aid afforded by him in the selection of books. In 1837, the South Sea Surveying and Exploring Expedition, as it is called upon the minutes, though generally known as the United States Exploring Expedition, made application for certain books on Comparative Anatomy and Natural History, which the Library Committee were authorized to sell them, as it was found they could be replaced by sending to Europe. In 1841, the numerical strength of the library was slightly diminished by the transference of certain books on diseases of the mind and on general literature to the Hospital for the Insane, then, as now, under the able management of Dr. Kirkbride. Dr. Charles D. Meigs, being about to leave for Europe in the spring of 1845, was authorized by the Managers to purchase, during his absence, works for the library at a cost of not more than three hundred dollars.

The increasing number of books rendered it indispensable, in 1847, that additional accommodations should be provided for them. In a special report of the Library Committee on this subject, they state that "the existing bookcases are all full, and there is obviously no space for more, either in the present library-room or in the apothecary-shop or hall. The committee therefore recommend that the partitions in the late female medical ward in the second story of the centre building be removed, and that it be suitably fitted up for the reception of the medical library. A fine room will thus be obtained, of convenient size, light, airy, and in all respects well adapted to the purpose. It will also serve for the Managers' room, and the present library may then be used exclusively for the office." Such is the present arrangement; but the old cases still remain in the office for other useful purposes, with the quaint staircase winding up in one corner, invisible until the doors of the case are opened. The alterations for the new library were at once effected, the physicians and

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surgeons agreeing that the expense should be defrayed from the medical fund; and the library was removed to the second floor early the next year, the Managers meeting there for the first time in June.

In 1852, Mr. George Ord presented one hundred and six volumes on Natural History and Medicine, chiefly standard works, and in 1861 a valuable ornithological work, by C. J. Temminck, which, when bound, constituted five folio volumes, with colored plates.

The Library Committee was authorized in 1855 to employ a suitable person to prepare a catalogue; and this labor was very faithfully and effectively performed by Dr. Emil Fischer, the catalogue embracing seven hundred and fifty pages, being exceedingly valuable for reference. A supplement to this, by August F. Müller, at that time the Librarian, was published in 1867, during which year also a resolution was adopted charging three dollars per annum to physicians and students for the use of the library. As in the earlier days of its history the museum was connected with the library, so also for a number of years past an anatomical and pathological museum has been annexed to it, under the charge of the same committee. The library grows quietly but slowly, scarcely ever receiving a donation, and yet the cases are now so crowded that several hundred volumes have been removed to another part of the building. The fee for life-privileges of the use of the library and attendance on the practice of the house is twenty-five dollars.

From the time of its passing out of the hands of the Apothecaries and Apprentices, the library has been under the care of several Librarians, almost all of whom have also acted as Clerks. These, mentioned in order of sequence, are as follows: William G. Malin, 1824–1840; William R. Clapp, 1840–1849; William H. Gobrecht, M.D., 1849–1850; Joshua Whitall, M.D., 1851–1852; William A. Dobbyn, 1853–1857; David T. Lewis, M.D., 1857–1861; Richard Randolph, Jr., 1861–1863; Joshua P. Edge, 1863–1865; August F. Müller, 1865–1867; and Alexander D. Stockton, the present incumbent, since that time. During portions of 1850, 1851, 1853, and 1854, temporary appointments were made by the Library Committee.

The two great libraries of the Pennsylvania Hospital and the College of Physicians would, if combined, form a very remarkable literary collection, embracing works in every department of medical literature and the kindred sciences. A comparison of the library catalogues of the two institutions exhibits a surprising absence of duplication; indeed, so many works are found in the one that have no place in the other, that these fine libraries, which in their aggregate sum up over twenty-seven thousand volumes, may be said to supplement each other. If any action looking to their consolidation should ever take place, Philadelphia would possess a magnificent library, far surpassing in value and resources that of any other cisatlantic city, which would be the pride of the profession. The Hospital library has never yet accomplished its full measure of usefulness; it is comparatively buried, its privileges actually enjoyed by but few, and its merits neither popularly known nor deservedly appreciated. It now embraces fully twelve thousand volumes, and there is not a department of medical science that is not illustrated in it; but the rules prescribe that it shall be open only three times a week for an hour at a time. It is principally used by the officers of the house, and only occasionally by the profession at large, although, as we have seen, founded and sustained by the unselfish relinquishment of fees by medical men.

THE MEDICAL LIBRARY OF THE PHILADELPHIA HOSPITAL.

ABOUT nine years ago, Dr. D. Hayes Agnew, in a lecture on "The Medical History of the Philadelphia Almshouse," gave many interesting particulars in regard to the library connected with the Hospital. From this we learn that the subject was first agitated for legislative aid in 1805, and that in 1808 a room was assigned for the library and the first expenditure for books made. The senior student was subsequently appointed Librarian, rules were adopted, money appropriated during several years out of the receipt for house pupils, and life-privileges granted for the use of the library at thirty dollars. In 1816, the Apothecary also became the Librarian, and a catalogue was prepared, estimated by Dr. McClellan, in 1818, to number one thousand and twenty-two volumes. In 1827, Dr. Horner presented one hundred and twenty foreign theses. Dr. E. F. Rivinus, one of the Resident Physicians, compiled a catalogue in 1831, which seems to be the only one ever printed, and which proved this library to be especially rich in ancient medicine and surgery. In 1836, the "United States Exploring Expedition" offered to purchase, at a large advance over the cost price, several important works belonging to the Hospital; but the offer was refused. The sale of clinical tickets enabled the medical board to add many books to the library, which soon numbered over three thousand volumes. The present aggregate probably varies but little from this total, for, although an annual appropriation of two hundred and fifty dollars has been made for several years past, we learn from Dr. Agnew's sketch that the library "has been plundered, by the vandalism to which it has been exposed, of much valuable matter." Dr. C. Pendleton Tutt was for several years Librarian, and was succeeded after his death in 1866 by Dr. J. L. Ludlow, the present Librarian, whose duties seem to be rather directed to the purchase and general supervision of the books, the giving out of these being intrusted to a reliable resident pauper.

The nuclei of other libraries may be found in several of our medical institutions; but none of them have as yet risen to such importance as to deserve special mention, though hereafter they may become of historic interest. A large number of medical works may also be found in our extensive miscellaneous libraries, as the Mercantile and the Philadelphia; the former con-

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taining about one thousand medical volumes, and the latter, in the main library and in its Loganian collection, several thousand volumes of very choice old medical books of the sixteenth, seventeenth, and eighteenth centuries. It seems unfortunate that such literary medical gems are not placed where they might be better known and appreciated.

THE VOTE OF THE PHILADELPHIA DELEGATION.

OUR correspondent R. M. T. writes us as follows:

"Permit me to make a more perfect record of the vote of the Philadelphia delegation on the question of rescinding *the woman resolution* than that which appeared in my Williamsport letter in the last number of the *Times*. Drs. Atlee, Boker, Drysdale, Lee, and Sargent voted to rescind. Drs. Cohen, Hellyer, and Turnbull were absent or did not vote. Drs. Gross, Atkinson, Ash, Bolles, Bunn, Baldwin, Evans, Fish, Fricke, Hatfield, Hinkle, Landis, Nebinger, Pancoast, Phelps, and Stetler voted *not* to rescind.

TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a stated meeting of the Pathological Society, held June 8, 1871, the President, John Ashhurst, Jr., M.D., in the chair,

DR. DE FORREST WILLARD exhibited specimens of *osteoid cancer* of the general osseous system, from J. C., aged 19 years, whose grandmother and aunt both died of cancer of the breast. The patient's health was perfect until twenty-two months before death, when he received a slight injury of the right foot, the effects of which continued in the form of slight uneasiness, which gradually became a constant pain, and at the end of a year prevented the use of his limb. Six months after the injury, he noted a slight prominence upon the outer face of the tarsus, which increased slowly for a time, but subsequently rapidly enlarged, and on October 1, 1870, was fifteen inches in circumference. At this time, the leg was amputated, by Prof. Agnew, at the junction of the middle and lower third. Three weeks later, the growth recommenced on the outer side of the tubercle of the tibia, and another appeared upon the anterior face of the seventh rib of the left side. Three weeks later, additional nodules appeared on various points of the skeleton, and finally from the end of the stump, which itself enlarged rapidly. He died, exhausted, in April, 1871.

The primary cancer of the foot involved all the bones of the tarsus. The secondary cancer of the stump exceeded three times the normal dimensions of the leg at that point, and extended to the knee. It was dense, hard, and nodulated. Similar masses occupied the first, fifth, seventh, and eleventh ribs, the sacrum, and the temporal bone, while in Scarpa's triangle lay two glands as large as English walnuts, stone-like in hardness. Except these glands, the soft tissues were nowhere involved.

Microscopic examination of the tumor of the tibia by Dr. J. G. Richardson proved the existence of a firm, highly-refractive stroma, within the meshes of which were found, singly and in groups, rounded, oval, and caudate cells, averaging the one-thousandth of an inch in length, and generally containing a large nucleus. Acetic acid dissolved the more highly-refractive portions of the stroma with effervescence. The lymphatic glands exhibited a similar structure.

DR. WILLIAM DARRACH exhibited a *larynx and trachea lined with false membrane*, removed from a child, aged three years, which had died of diphtheria. The child, previously healthy, having taken cold, was found, at the doctor's first visit, with fever, swollen throat, and patches of whitish membrane on its tonsils. It was placed on supporting treatment, but became gradually worse, the respiratory embarrassment increasing until the breathing could be heard in an adjoining room. Its face became purple, but was not anxious in its expression, nor did the nostrils dilate in breathing. The patient died on the third day.

At the post-mortem examination, sixteen hours after death, the larynx and trachea were removed. They were lined by a yellowish-white, adherent membrane, soft, but well formed throughout, and extending even into the smaller bronchial tubes. The other organs were normal, except the right lung, which was congested.

The diagnosis of diphtheria was thought to be the proper one here, associating the incipient symptoms with the facts that an epidemic of diphtheria was prevailing at the time, and that several of the cases were fatal.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

AT a stated meeting, held June 5, 1871, James Tyson, M.D., in the chair,

DR. J. G. RICHARDSON exhibited several *slides of microscopic objects mounted in a saturated solution of acetate of potash*, as recommended by Max Schultze (see remarks of Dr. James Tyson, *Medical Times*, No. 18, p. 345), and desired further to ask the attention of the Section to this new and valuable preservative menstruum. He stated that according to his experience, confirmatory of that recorded by previous observers, it possessed two great advantages, especially for beginners in microscopy. The first of these consists in this, that after meeting during an ordinary examination with an interesting specimen (such as a group of tube-casts or some well-displayed alveoli filled with cancer-cells in the edge of a thin section from a malignant growth), it is by no means necessary to remove the cover and thus run the risk of losing the object, because a small quantity of the acetate of potash solution, placed at the margin of the thin glass, will readily diffuse itself beneath it, and accomplish the purpose designed. He had found it advisable to apply a drop of the solution at two opposite edges of the cover, so as to obviate any strong currents which might disarrange the specimen; also, to allow it twenty-four hours to penetrate completely before wiping off the excess with a *moistened* cloth. The second additional advantage gained by the employment of this preservative fluid is the absence of any disposition to mingle with the ordinary white zinc cement, preventing the latter from running under the thin cover when applied around its edge. In no case was any tendency observed to such a misfortune, so liable to occur with most preservative liquids, unless cells are employed.

The specimens exhibited comprised one of blood, three weeks old, showing clearly the leucocytes and red blood discs —the latter, although flattened, were not crenated, and retained a large proportion of their coloring-matter; one of tube-casts from the urine of Bright's disease, containing fatty epithelial cells; one of a specimen of croupous (fibro-corpuscular) lymph stained with carmine, containing well-defined leucocytes; one of a thin section from a fibromatous tumor; one of crystals of uric acid, which had been slightly granular when mounted, but showed no further deterioration during the following two weeks.

In reply to a question from Dr. L. S. Bolles, Dr. R. stated that the solution employed was made by simply dissolving an avoirdupois ounce of the dry acetate of potash (as sold by all druggists) in half a fluidounce of river-water, and allowing it to become clear by standing a day or two.

DR. W. S. HALSEY inquired whether this solution would not be apt to react with some of the crystalline urinary deposits in such a way as to interfere with its use in their preservation.

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DR. RICHARDSON replied that such would probably be the case in some instances, as on one occasion, when attempting to mount some octahedra of oxalate of lime, he had found their places occupied after twenty-four hours by stellate groups of feathery crystals,—very likely the result of double decomposition; a slide upon the table, however, indicated no such action as regards uric acid, and of course no such danger of chemical reaction is to be apprehended with specimens of animal or vegetable tissues.*

DR. JAMES TYSON exhibited a *section of a tooth showing hypertrophy of the cementum, or exostosis*, which he thought interesting in connection with the discussion which took place at the meeting reported in *The Medical Times*, No. 13, April 1, 1871. At this meeting it was said that, since cementum is not true bone, the term *exostosis* is not the proper one for this hypertrophy. At that time Dr. T. said that he thought the only objection which could be urged against the position he claimed for cementum—that of true bone—was the absence of the Haversian canals. This he considered due to the fact that the quantity of cementum was usually so limited as not to require additional provision for blood-vessels, its most remote points being still sufficiently near the periosteum to be nourished by the capillaries of the latter tissue in connection with the intermediate canaliculi of its own structure. He thought that if the cementum were present in greater quantity, Haversian canals would be furnished. The specimen he now exhibited confirms the view then taken. It presents an abnormal increase of cementum, apparently beyond the power of the periosteum to nourish. Accordingly there are supplied Haversian canals, of which six undoubted transverse sections can be counted, and two or three of more doubtful nature. In two there can be seen an evident approach towards concentric arrangement of the lacunæ, which, although by no means so regular as is that generally met with in bone, is still plainly discernible. In two situations, again, the Haversian canals are evidently vertically cut.

After all, this view is only that which is held by the authorities best conversant with these matters. Thus, in the American edition of Mr. John Tomes' excellent work on Dental Surgery, p. 494, we have the following with regard to cementum:

"The occurrence of vascular canals (Haversian canals) is to a certain extent exceptional, being dependent upon the presence of a larger amount of cementum than is usually found in perfectly healthy teeth. Their presence is, however, not necessarily an indication of disease, for when two contiguous roots are united by the intervention of cementum, a vascular canal will not uncommonly be found to traverse the medium of union."

Cementum is compared by the same author to "primary bone," or bone which has been developed in temporary cartilage, or upon the surface of existing bone, in which also the relation of the Haversian canals to the lacunæ and canaliculi is stated to be less definite, and that the latter are directed with less regard to the position of the contiguous vascular canal; whereas, in "secondary bone," or bone which has been developed to supply the place of pre-existing bone removed by absorption, the lacunæ partake of the concentric disposition, and direct a large portion of their canaliculi towards the Haversian canal.

These facts, taken in connection with the statement made by the same author,† that when the layer of cementum is thin the *lacunæ* also are altogether absent, and even *canaliculi* do not appear until a certain thickness is attained, Dr. T. thought would sufficiently confirm the view taken at the previous meeting.

The specimen was prepared by Prof. E. Wildman, of the Pennsylvania College of Dental Surgery, and belongs to him. The observation was also primarily made by him, his attention having been directed to the subject by the report of the remarks of Dr. T. in the *Medical Times*.

* Although this assertion is, I presume, strictly true, yet the fact that we can rarely obtain animal structures without some portion of their natural fluids (which often contain crystallizable salines) may *practically* require it to be somewhat modified. At all events, I have, since the above was written, observed a very few columnar crystals form around a specimen of encephaloid cancer of the liver, preserved for three weeks in acetate of potash solution.—*Note by Dr. Richardson.*

† Tomes, op. cit., p. 493.

REVIEWS AND BOOK NOTICES.

A TREATISE ON THE CHRONIC INFLAMMATION AND DISPLACEMENTS OF THE UNIMPREGNATED UTERUS. By WILLIAM H. BYFORD, A.M., M.D., Professor of Obstetrics and the Diseases of Women and Children in the Chicago Medical College; Author of the "Practice of Medicine and Surgery applied to the Diseases and Accidents incident to Women," etc. Second Edition, Enlarged, with numerous Illustrations. 8vo, pp. 248. Philadelphia, Lindsay & Blakiston, 1871.

"Sure as eggs is eggs, this here's the bold Turpin," exclaimed the unhappy Bishop, as he recognized the mosstrooper by his reckless dash and swaggering irreverence. So would the reader at once discover the author of this volume, masked though he might be under the slyest of *noms de plume*, by his helter-skelter style and his defiant bearing towards all the ancient and honorable canons of syntax. Language was characterized by Talleyrand as a convenient disguise for one's thoughts: this definition Prof. Byford has accepted with enthusiasm. Many of his sentences are tricked out in cumbersome euphuisms; the meaning of others can only be guessed at; and as for parsing them—well, one might as well attempt to parse the characters on the ruins of Karnak. But never mind, he has a Roland for our Oliver, since even the great Frederick, with all his fame, could not conjugate a verb in *mi*.

Thus much for the attire. And now for the substance: the cowl does not make the monk, and language to the author is not so much a symbol, as a cowl. Six years ago the first edition of this work appeared, and was well received by the profession. It was a good book in its way,—a very good book,—and so is the present edition; but, while the former led the times, the latter lags behind, and does not show that thrifty gleaning which we had hoped for. Until within a very short time the subject of gynæcology was a *terra incognita;* all honor, therefore, to Prof. Byford and to those sturdy pioneers who have explored this land so well. But the time, alas! comes when lusty joints stiffen,—when sinewy limbs grow weary; and the reader will be saddened to find the author still loitering about his last camping-ground and raking out the embers from its ashes, while other men have struck their tents and toiled on, *per aspera et ardua*, far beyond the horizon of his outlook. Slow fire makes sweet malt: in six years much may be learned and much unlearned; yet after the lapse of this time—and a time of progress it has indeed been—the author is still patting the same pet theories lovingly on the back, and, with a big lump in his throat, is bidding them good-speed, as if they were just out of jackets and just going out into the cold world.

Who else, for instance, in this year of grace could warmly advocate so unscientific an instrument as the elastic ring-pessary, or still continue to be the firm partisan of the stem-pessary,—that abomination which has been tried and found wanting? In the treatment of uterine disorders, who but he relies mainly on the nitrate of silver and on the more violent caustics? "It is to be feared," he says, "that the direful effects of the white-hot iron, Vienna paste, potassa fusa, etc., much more common in the imagination of the writers than in fact, have deterred a large body of the profession in America and in Europe from making a temperate use of what is called the caustic treatment, and thus have retarded progress in the management of these cases. Nobody will deny that all these agents can, and in injudicious hands do, produce mischief. This is no argument, of course, against their use in proper cases." At the present day, this sounds like the *ægri somnia vana*,—the wanderings of a sick brain.

We grant him that "the advocates of the local treatment of uterine disease are not to be held responsible for the rashness of the ignorant." Yet it is not the "ignorant" and "injudicious," but gynæcologists of the first rank, who have pronounced against this "caustic treatment" as a treacherous one,—as one which in even their skilled hands has caused more mischief than good. Pray, what better remedies are there than the ethereal and alcoholic solutions of iodine, carbolic acid, the various glyceroles, tents, and injections of hot and medicated water? On these and on other points of treatment

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we cannot agree. On the use of mercury in uterine hypertrophy we are quite sure that the author and Dr. J. Hughes Bennett could not possibly maintain even an armed neutrality. We owe him, however, a debt of gratitude for the introduction of tents made of slippery-elm bark, which bid fair to prove safe and very efficient agents in enlarging or straightening out the cervical canal.

The chapters treating of the constitutional and sympathetic disturbances arising from uterine disorders are marked by great originality of observation and by sterling good sense. Almost all the moral and mental derangements of the sex are referred by him to the uterus. Here, in his opinion, is the source of all these perturbations: the brain he acquits of any causality in their production. This seems rough on the uterus, and looks much like a sop thrown to *Cerebrum*,—as Mrs. Partington might say. Yet there is nevertheless a world of truth in it. On this fallow ground the author has worked to his credit, and to much purpose.

Our exceptions to a few of the teachings of this book have been taken in no unfriendly spirit. Prof. Byford is an earnest worker,—a representative man; and we might go farther and fare worse in search of a better guide,—a more conservative one certainly could not be found. One serious fault characterizes and underlies all his writings: he is too self-reliant to consult and utilize the work done by fellow-laborers, and his books therefore communicate the crotchets of an individual rather than the collated experience of the master-workmen of the profession. Genius is truly "the birth-hour gift," but it would be well for Prof. Byford to reflect that possibly others besides himself may have received it.

BODY AND MIND: An Inquiry into their Connection and Mutual Influence, specially in Reference to Mental Disorders, etc. By HENRY MAUDSLEY, M.D. London, 1870.

MECHANISM IN THOUGHT AND MORALS. An Address delivered before the Phi Beta Kappa Society of Harvard University, June 29, 1870. By OLIVER W. HOLMES, M.D. 12mo, pp. 101. James R. Osgood & Co., Boston, 1871.

Dr. Maudsley could hardly write a book of indifferent merit, and even this, though the greater part of it is but a repetition in brief of what he has already said in his larger work, is well worth the reader's attention. The general doctrine is well presented, the illustrations are happily chosen, and a strain of active, vigorous thought pervades the whole book. The psychological student cannot be too strongly impressed with the fundamental principle of his philosophy, that mental manifestations must be observed wherever they appear, whether in sickness or health, in man or the lower animals. With many eminent writers of the present time in this department of science, he believes that the individual is not an aggregate of two different things, body and mind, but a simple, indivisible unit, in which there is no essential distinction between the functions of the mind and those of the body. He believes that the popular notion of a mysterious entity or principle operating through the brain, as the musician plays upon his instrument, has greatly obstructed the progress of psychological science, because, this principle being considered the exclusive possession of man, inquiry has been confined chiefly to him, and chiefly to the facts presented by self-consciousness. He shows that some of the functions of the spinal cord and of the sensory ganglia are as clearly mental as those of the brain. Indeed, this fact, as admirably displayed in the insect tribe, nobody thinks of disputing. Many worthy people are greatly alarmed by this kind of doctrine, for to them it seems to make man no better than a beast. But it really does not in the slightest degree affect the question of a future existence. It merely widens the field of secondary causes, and places the great primary cause a little farther off. Within our own day and generation, the vital processes were supposed to be governed by a spiritual entity which we call Life, and it endangered a man's professional prospects to deny it. Dr. Barclay, of Edinburgh, a man of some eminence in his day, wrote a large book to prove it, and Abernethy made a furious onslaught on Lawrence because he spoke disrespectfully of it. Who believes the doctrine now? It would mark a scarcely greater revolution of opinion if the doctrine of a self-existent, independent entity called Mind should share the same fate.

The volume also contains a couple of essays, one of which, on the Limits of Philosophical Inquiry, is a very sensible reply to a lecture read by the Archbishop of York, in which he charged scientific men with pursuing their inquiries beyond their appropriate province, and becoming abettors of atheism. The lecture presented the current objections to natural science entertained by the average educated English mind, and afforded the doctor an opportunity to show, as he has done very clearly, how futile they are.

Dr. Holmes' psychology has been learned in the same school as Maudsley's; and we are glad that this scholarly address, which delighted the savans and literati of Cambridge and Boston, has been published in a permanent shape. His purpose is to regard thought from its physical side,—to penetrate, if possible, into the organic movements by which it is controlled and manifested. He unfolds and illustrates the doctrine of Leibnitz, that much of our thought is unconscious, and of the nature of an automatic operation. This "unconscious cerebration," as it has been termed, he describes and illustrates in a variety of instances, with that remarkable quaintness of thought and felicity of expression which have made his books such delightful reading to every class of minds. We are sure that mental philosophy has never been taught in so attractive a form, nor in a manner more likely to impress its truths on the mind. By a homely but happy illustration, the doctor throws more light on a mental phenomenon than it would have received from a whole chapter after the manner of the old metaphysicians. What better idea can one obtain of "the automatic flow of thought" than is conveyed by the story of the two Irishwomen freeing their minds at each other from the windows of opposite chambers? Who will ever forget the comparison of a dilatory effort of memory to the "delivery of a prepaid bundle, laid at the door of consciousness like a foundling in a basket," or that of his mathematical friend's delayed reply to a question "with half a dozen others stratified over it, to the thawing out of the frozen words as told of by Baron Munchausen and Rabelais"? The charge of materialism the doctor meets by carrying the war into Africa, and showing that they are the true materialists who believe in election and predestination. But no "notice" can do justice to the little book, and therefore we advise our readers to buy it and judge for themselves.

ATLAS OF OPHTHALMOSCOPY, Representing the Normal and Pathological Conditions of the Fundus Oculi, as seen with the Ophthalmoscope. Composed of Twelve Chromo-Lithographic Plates, containing Fifty-nine Figures, Drawn from Nature, and accompanied by an Explanatory Text. By DR. R. LIEBREICH. The Text translated by H. ROSBOROUGH SWANZY. Second Edition, Enlarged and Revised. John Churchill & Sons, London, 1870.

The first edition of this Atlas was issued in January of 1863, and it may be said to have been the pioneer of Ophthalmoscopy, as all the previous plates on this subject had been very imperfectly made, and circulated to a very limited extent. This Atlas seemed exactly suited to meet a want until that time never sufficiently provided for. Its author appears to be peculiarly fitted for the work. As an assistant of Professor Helmholtz at the time he invented the ophthalmoscope (at Königsberg, in the year 1851), he had the privilege of studying the instrument, in its theory, with the inventor himself; and soon afterwards the clinic of Professor Graefe gave him abundant opportunity to determine the practical value of the instrument. The great majority of the drawings found in the Atlas are representations of disease observed at this clinic. In order to insure the lithographs being fac-similes of the original drawings, he personally assisted in the execution of the lithographic plates; and, as the drawings were very accurate delineations of disease, the result has been an admirably perfect production.

The first edition of the Atlas (January, 1863) was exhausted long before the issue of the second, but the time required for the preparation of the new drawings, which have been added to the last edition, accounts for the delay in its issue. In these new drawings are found illustrations of "Choroiditis Disseminata," "Recent Retinitis Hemorrhagica," "Neuritis Optici," "Partial Atrophy of the Optic Disc,—secondary to Retro-ocular Affections of this Nerve,"—"Atrophy of the Papilla,—secondary to Retinitis;" and, as it was not desira-

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ble to increase the size of the work (on account of the price), room has been made for these new illustrations by omitting some less instructive drawings found in the first edition. In its present form the Atlas has twelve plates, containing fifty-nine illustrations.

By those only who have been engaged in a similar work can the labor involved in the preparation of such an atlas be justly appreciated. When one considers the length of time required to become even moderately proficient in the use of the ophthalmoscope,—when one considers that, in addition to this, the manual dexterity to copy accurately what is seen is also necessary, and how much time and trouble will be required in the preparation of sufficiently accurate lithographic plates to transfer these drawings to paper,—if all these be considered, then some idea of the amount of labor involved in the preparation of such an atlas as this may be obtained.

Taken as a whole, this edition of the Atlas contains much to praise and very little to find fault with; and to any one desiring such a work it may be most thoroughly recommended, and, at the very reasonable price asked for it, a large circulation may be predicted.

BOOKS AND PAMPHLETS RECEIVED.

The Eye in Health and Disease; being a Series of Articles on the Anatomy and Physiology of the Human Eye, and its Surgical and Medical Treatment. By B. Joy Jeffries, A.M., M.D., etc. 8vo, pp. 112. Boston, Alexander Moore, 1871.

The Modern Operation for Cataract. A Lecture delivered at the Harvard Medical School. By Haskel Derby, M.D., University Lecturer on Ophthalmology. Pamphlet, pp. 23. Boston, 1871.

Can Maternal Mental Emotion produce Malformations? By G. J. Fisher, M.D. Pamphlet, pp. 57.

Thirteenth Annual Announcement of the Chicago Medical College.

Annual Announcement of the Medical Department of the University of Buffalo.

GLEANINGS FROM OUR EXCHANGES.

AN EXPERIMENTAL INQUIRY INTO THE CONSTITUTION OF BLOOD AND THE NUTRITION OF MUSCULAR TISSUE.—Dr. William Marcet (*Nature*, May 18) announces the following as the results obtained from the inquiry which forms the subject of a paper read before the Royal Society, May 11.

1. That "blood is strictly a colloid fluid."

2. "That although blood be strictly a colloid, it contains invariably a small proportion of diffusible constituents, amounting to nearly 7.3 grammes in 1000 of blood, and 9.25 grammes in an equal volume of serum, these proportions diffusing out of blood in twenty-four hours."

3. "That the proportion of chlorine contained in blood has a remarkable degree of fixity, and may be considered as amounting to three parts (the correct mean being 3.06) in 1000."

4. "That blood contains phosphoric anhydride and iron in a perfect colloid state, or quite undiffusible when submitted to dialysis, the relative proportions appearing to vary from 78.61 per cent. of peroxide of iron and 29.39 of phosphoric anhydride to 76.2 and 23.8 respectively, the proportion of phosphoric anhydride having a tendency to be rather higher."

5. "That blood contains more phosphoric anhydride and potash, bulk for bulk, than serum."

6. "That a mixture of colloid phosphoric anhydride and potash can be prepared artificially by dialysis, and that the colloid mass thus obtained appears to retain the characters of the neutral tribasic phosphate from which it originates; it exhibits an alkaline reaction, yields a yellow precipitate with nitrate of silver, and after complete precipitation the reaction is acid."

7. "That by dialyzing certain proportions of phosphate of sodium and chloride of potassium, during a certain time, proportions of phosphoric anhydride, potash, chlorine, and soda are obtained in the colloid fluid very similar to the proportions these same substances bear to each other in serum after twenty-four hours' dialysis."

8. "That muscular tissue is formed of three different classes of substances: the first including those substances which constitute the tissue proper, or the portion of flesh insoluble in the preparation of the aqueous extract, and consisting of albumen and phosphoric anhydride with varying proportions of potash and magnesia; the second class including the same substances as are found in the tissue proper, and in the same proportions relatively to the albumen present in that class, but existing in solution and in the colloid state; the third class including the same substances as are found in the two others, and, moreover, a small quantity of chlorine and soda, which, although relatively minute, is never absent. The constituents of this class are crystalloid, and consequently diffusible, the phosphoric anhydride and potash being present precisely in the proportion required to form a neutral tribasic phosphate, or a pyrophosphate, as the formula $2KOPO_5$ can equally be $2KOHOPO_5$."

9. "That flesh contains in store a supply of nourishment equal to about one-third more than its requirements for immediate use, this being apparently a provision of nature to allow of muscular exercise during prolonged fasting."

10. "That the numbers representing the excess of phosphoric anhydride and potash in blood over the proportion of these substances in an equal volume of serum, in the regular normal nutrition of herbivorous animals, appear to bear to each other nearly the same relation as that which exists between the phosphoric anhydride and potash on their way out of muscular tissue."

11. "That vegetables used as food for man and animals, such as flour, potatoes, and rice, transform phosphoric anhydride and potash from the crystalloid or diffusible into the colloid or undiffusible state; and it is only after having been thus prepared that these substances appear to be fit to become normal constituents of blood and contribute to the nutrition of flesh."

"A final remark, and one which is worth consideration, is the fact established by the whole of the present investigation, that there is a constant change or rotation in nature from crystalloids to colloids, and from colloids to crystalloids."

LEUKÆMIA — SLIGHT SPLENIC ENLARGEMENT — HYPERPLASTIC GROWTH OF THE MEDULLA OF THE BONES.—Prof. Waldeyer reports the following interesting case in *Virchow's Archives*, March, 1871:

The patient was received in the hospital on account of an anchylosis of the elbow and knee-joint of fifteen years' duration. He stated that during the last few days severe hemorrhage had taken place from two fistulous openings near the knee-joint, on account of which, and of the long-continued suppuration, amputation of the joint was deemed advisable. Death, with well-marked symptoms of pyæmia, followed on the twelfth day after the operation. The marked paleness and cachexia of the patient during life gave rise to the suspicion of leukæmia. The blood was therefore examined with the microscope, and an enormous increase of the white blood-corpuscles was discovered. A slight but decided increase in the area of percussion dulness over the spleen was also recognized.

A detailed post-mortem report follows, from which we extract the following:

The femur and tibia were divided longitudinally, and it was found that the bone-structure, which had almost disappeared, had been replaced by a soft—in places almost gelatinous—tissue, which was in general of a dark grayish-red color, closely resembling the splenic pulp, here and there, however, of a yellowish hue, like adipose tissue. The tibia was enlarged, the external lamella only five millimetres in thickness, and exceedingly hard. A layer of the same character was found limiting the medullary cavity of the bone, so that it appeared as if two thin, bony, concentric tubes had been placed the one inside the other, the intervening spaces being filled with the rapidly-proliferating medullary tissue. In many

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places the external lamella had been perforated, and had therefore acquired a cribriform appearance. From these openings small fungous growths of medullary tissue projected. The cavity of the knee-joint was completely filled with a new growth resembling adipose tissue. The cartilages had also been perforated, and the proliferating medulla of the bones projected into the cavity of the knee-joint and became continuous with the growth just described. The spleen was the seat of numerous old infarcti, and also of new hyperplastic formations. The tonsils and lymphatic follicles of the tongue were enlarged, and in places projected like polypoid growths.

Microscopically the medulla consisted of round lymphoid cells, myeloplacques, and here and there the yellow nucleated bodies of a high refractive power, described by Neumann. In the spleen, the Malpighian bodies were found to be hypertrophied, consisting of lymphatic cells so closely packed that a reticulum could with difficulty be discovered. Numerous small lymphomatous growths were also found in the liver.

Waldeyer remarks that undoubtedly a chronic inflammatory disease of the joints had existed for some time, ending in caries. Associated with this process, however, we recognize another condition, which has been termed eccentric atrophy, and the interesting question arises, Was this the *cause* or the *effect* of the inflammation? Waldeyer is inclined to regard it as the primary lesion, the disease of the joint being caused by the hyperplastic medullary growth penetrating the cavity, destroying the cartilage, and thereby producing a condition in which the slightest external injury would result in a destructive inflammatory process. The changes which occurred in the medulla are not, according to Waldeyer, to be considered as inflammatory in character,—are not the same as those which take place in osteo-malacia,—but consist in a simple hyperplastic growth of the medulla, which Neumann has already shown often takes place in chronic diseases, leading to general marasmus. An analogy is then drawn between this condition and the hyperplastic changes which occur in the spleen and lymphatic glands, with which we are familiar through the labors of Virchow.

Again, the changes in the bones in this case undoubtedly date farther back than the moderate enlargement of the spleen, which alone is not sufficient to explain the excessive increase in the white corpuscles of the blood: hence Waldeyer does not hesitate to bring the hyperplastic condition of the medulla of the bones in a generic relation to the leukæmia, and to declare that if not the *principal* it is at least an *equal* factor in the production of this disease. This case, therefore, confirms the observations which Neumann has made as regards the relation between the medulla of the bones and the white blood-corpuscles, which under abnormal conditions of hyperplastic growth may result in the production of leukæmia.

STRUCTURE AND FUNCTION OF THE MUCUS-GLANDS OF THE STOMACH.—This title is applied to a résumé of some recent observations of M. Ebstein, principally upon dogs, in *The Academy* for April 15, 1871, taken from the sixth number of the *Centralblatt* for 1871:

The mucus-glands are found chiefly in the pyloric region, where they replace the true peptic gastric glands. The pyloric region is of paler tint than the rest of the stomach, and gives an acid reaction to test-paper, though not quite so intense as in other parts. The epithelium lining the interior of the stomach and the pits or alveoli is cylindrical, the cells being usually closed; but sometimes, especially during digestion, they burst, the mucous contents then escaping. At their bases are smaller cells, which at first resemble lymph corpuscles, but gradually develop into the columnar cells, and are particularly distinct in preparations made with pirosmic acid, by which reagent they are less strongly tinted than the ordinary cells. Into the bottom of the alveoli of the pyloric region, two, three, or more mucus-glands open. These present an orifice, a neck, and a clavate extremity. Their interior is lined by a layer of columnar epithelial cells, the nuclei of which are near their attached extremities. The cells are shorter, darker, and more granular than those of the surface of the stomach generally, and there are no "supply" or secondary cells at their bases. They resemble the cells lining the peptic glands, which have been described by Heidenham as "principal cells" (*Hauptzellen*), not only in the points mentioned above, but in their microchemical reactions and the changes they undergo during digestion. From all this it appears that the statements made in the physiological works, to the effect that there are two kinds of glands, one destined to supply the gastric juice, the other to yield the mucous fluid of the stomach, are not borne out by the results of microscopic research. It would rather appear that all the glands of the stomach are lined by an epithelium which secretes gastric juice, while the general surface of the stomach is invested by an epithelium capable of producing the mucus.

[We have abstracted this résumé with no practical alteration, on account of the acknowledged importance of the subject, though there seem to be some inconsistent statements in it. Thus, the title contains the words "mucus-glands," and, again, it is stated that the *mucus-glands* are found in the pyloric end of the stomach, where they replace the *peptic glanas;* yet only one kind of gland is described, which turns out not to be a mucus- but a peptic gland; and, finally, it is stated that there is really a single form of gland, which is the peptic, and that the mucus is produced by the surface epithelium throughout the organ. There is reason for admitting this, but its final admission is quite inconsistent with the early statement that the mucus-glands are found chiefly in the pyloric region. The original paper is not accessible to us.—ED.]

CAST OF THE FEMALE BLADDER.—At the meeting of the Southeastern Branch of the British Medical Association (*Brit. Med. Jour.*), May 10, Dr. Wardell exhibited an extraordinary pathological specimen, consisting of what seemed to be the exuviation of the entire mucous membrane of the urinary bladder, in a woman aged 28, admitted into the infirmary. The mass was absolutely seen by the house-surgeon to pass out of the bladder. Dr. Waddell observed that he had referred to several works on pathology, but could find nothing resembling the case from which the specimen was derived. He regarded the product as a croupous plastic exudation.

TREATMENT OF STRICTURE OF URETHRA.—Mr. W. F. Teevan (*British Medical Journal*, May 13, 1871, p. 501), in the course of his adverse comments upon the forcible dilatation of urethral stricture, says, "All statistics published are nearly useless, as they omit to state what was the condition of the urethra immediately before the operation and three years afterwards." Forcible rupture, according to this writer, turns an organic stricture into a traumatic lesion, tending to contraction, necessitating subsequent treatment by continuous dilatation.

MISCELLANY.

PHYSICIANS IN THE UNITED STATES.—We take the following facts from the Philadelphia *Press:*

"The total number of physicians who paid taxes to the Government for the year ending April 30, 1871, was 49,798. Of these there were—regular, 39,070; homœopathic, 2961; hydropathic, 133; eclectic, 2860; miscellaneous or not classified, 4770. These figures show that the number engaged in the profession has been over-estimated. The usual guess at the number of homœopaths has been 10,000. It is believed that the Government list is very full and accurate."

It is said that the Internal Revenue Department has prepared a list giving the name and post-office address of every one of the 49,798 physicians.

A SATURATED SOLUTION OF ACETATE OF POTASSA FOR MICROSCOPICAL PURPOSES.—Dr. William M. Herron, of Alleghany, writes us that this may be obtained in the following simple way:

"Expose the salt in a wide-mouthed bottle to the steam coming out of the spout of a tea-kettle for a few minutes. Pour the solution thus formed into another bottle, and expose again till all is dissolved."

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METEOROLOGICAL.—The mean temperature of the month of June just past was 74.51° F. The average of means for the same month during the past eighty years is 71.73° F. The highest mean on record for June is 77.35° F., in 1870; the lowest is 64° F., in 1816. The highest temperature indicated by the thermometer during the month was 90.50° F., on the 7th; the lowest was 60° F., on the 30th.

The rain-fall during the month was 3.773 inches; the average rain-fall of June during the past thirty-four years is 4.10 inches.

THE PROCEEDINGS OF THE AMERICAN MEDICAL ASSOCIATION.—Dr. William B. Atkinson, the Secretary of the Association, intends to issue a pamphlet edition of the minutes of the late meeting, at twenty-five cents per copy.

MEDICAL APPOINTMENTS.—Dr. Broadbent, Dr. Meadows, and Mr. James Lane have been elected to fill the vacancies caused in the Senior Staff of St. Mary's Hospital by the retirement of Dr. Sibson, Dr. Tyler Smith, and Mr. Samuel Lane, in accordance with the laws of the institution, at the end of their twenty years' term of office.

Dr. Murchison, F.R.S., has been recommended by the Grand Committee for election by the Governors as Physician to St. Thomas' Hospital, Mr. Croft for election as Surgeon, Dr. John Harley and Dr. Frank Payne as Assistant-Physicians, and Mr. Francis Mason and Mr. Henry Arnott as Assistant-Surgeons. The *British Medical Journal*, in commenting upon these nominations, says,

"St. Thomas' Hospital is, we cannot but think, peculiarly fortunate in having the opportunity of acquiring at one stroke so many elements of intellectual strength as it has gained by the addition to its staff of Murchison, Harley, Payne, MacCormac, Liebreich, in the liberality and judgment shown in the elections, and in the just promotion and wider scope of exertion which it has now offered to the able staff who have long enabled it to hold a proud place among metropolitan institutions and to do honor to its traditional reputation."

FEMALE DOCTORS IN FINLAND.—Women may hereafter study medicine at the University of Helsingfors, the Emperor of all the Russias having intimated his assent to the expressed wishes of his Majesty's Finnish subjects.

IMPROPER ADVERTISEMENT.—As long as the right is granted to any one, no matter how ignorant, to patent and to vend a compound of his own mixing, we may expect to have the daily papers filled with advertisements of quack medicines. There is a class of such advertisements, however, which we submit that no editor who has any respect for himself or for his calling should accept. One of this class, taken from a Vicksburg newspaper, was sent to us a few days ago. It is headed, in large letters, "To the Ladies! Dr. Pancoast's Female Pills; a Positive Cure for Suppression or Irregularity arising from any Cause whatever." This is followed by a letter dated Philadelphia, February 6, 1871, and purporting to be written by R. M. Levis, M.D., who is asserted in the advertisement to be a well-known physician, but can scarcely be possessed of much skill in diagnosis, for he says that he gave these pills to a pregnant woman, not having discovered her condition, with the effect of bringing on an abortion. Although he says that none of the usual signs of pregnancy were present, we think that there can be but little doubt that the ladies (?) are expected to see in the power which the pills possess to produce a miscarriage one of their principal recommendations.

In looking over the city directory for this and last year, we cannot find the name either of R. M. Levis or of J. Walker Pancoast,—for the address of the advertiser of the pills is Philadelphia,—and therefore doubt the existence of any such persons. May it not be that these names are assumed for the purpose of deluding the unwary into the belief that they belong to well-known physicians of this city?

COMMENDABLE CONDUCT OF FRENCH PHYSICIANS.—We find in the *London Lancet*, which in its turn quotes from *L'International*, of London, a statement that the attempt to destroy the Cathedral of Notre-Dame by fire was frustrated by the courage and perseverance of the house-physicians and house-surgeons of the Hôtel-Dieu. These young and meritorious members of our profession obtained by their resolution and firmness the assistance of a number of persons, and succeeded in extinguishing the fire, which would in all probability have extended to the Hôtel-Dieu, and would have been the cause of a frightful loss of life.

PROF. KARSTEN AND THE BOYS.—We learn from a letter to the *British Medical Journal*, that Prof. Karsten, the learned Viennese Professor of Botany, has become involved in a somewhat peculiar difficulty. It appears that of one hundred and six candidates who were marked *valde bene* by the other professors of the University, one hundred and two were rejected by the Professor of Botany. This seems to have rendered the students desperate, and on the 3d of May the gentlemen were prepared to give the professor a warm reception. Whether he had been forewarned or not, does not appear, but he sent his assistant to begin the lecture; whereupon the indignant class went to his private room, where he was engaged, and attempted to administer castigation; and but for the timely interference of the other members of the faculty, who hurried the stringent professor to his carriage, the latter would have been roughly handled. As it was, it is stated that he did not escape without blows. After the disturbance, Prof. Karsten applied at the police-station at Alsergrund for permission to carry arms, so that, provided with a revolver and a sword-cane, he should be in a condition to meet the "barbarous horde," who might insult him at his next lecture. He also demanded that two hundred policemen should be placed at his disposal for the apprehension of the students in case they should offer further insult. The request was not granted, as the commissary of police thought that the amount of mischief which might arise could not be calculated. Prof. Karsten then said he wished to be permitted to carry arms for self-protection in his botanical excursions, a request which was again declined until the commissary should consult the director. The latter also refused Prof. Karsten's request, and desired him to avoid the scene of strife until the government had considered the subject. A similar suggestion reached the professor from the Consistorium of the University and the Dean of the Faculty of Medicine. If such is the treatment of the rigid examiner in Germany, a country the cultivation of whose students is acknowledged by the world, we tremble to think of the risks he would run among American students of medicine.

A NEW WAY TO SWINDLE.—A German woman, living in this city, was recently swindled out of forty dollars by a fellow named Fergus, who, pretending to be a physician from Germany, promised to cure her sick child by a charm which he called "Nervous Sympathy." "Don't be drugging your

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child with your infernal allopathic stuff, but leave the child to me, and I warrant it will be on its legs in short order." The mother giving her consent, the child was submitted to the "Nervous Sympathy" practice, which is thus described in the *Evening Telegraph*:

"Fergus commenced operations by drawing from his pocket a small vial, the contents of which he tasted himself, and then gave some to the infant. He then asked for a two-dollar bill. This was produced. He laid it upon the table, sprinkled it with the mysterious liquid, folded it up, and handed it back again to the mother. All this time he was muttering and mumbling like a lunatic."

After this he went away, promising to return in half an hour. Faithful to his promise, he reappeared, and recommenced his nervous-sympathy operation, during which he managed to discover that the woman had forty dollars in greenbacks in the house. This she was desired to produce. The money was of course sprinkled with the contents of the little bottle, and, the mother being sent up-stairs to sprinkle the child, was carried off by the conjurer.

It will be satisfactory to our readers to know that the sharper is now safely lodged in the county jail.

INFIRMARY OR HOSPITAL?—A singularly common error is pointed out in the use of the terms *infirmary* and *hospital*, by the editor of the *British Medical Journal* (May 27, 1871), which is, however, mainly confined to England and this country. A *hospital* is defined as a place for shelter or entertainment, for the exercise of "hospitality," while an *infirmary* is a place for the reception of the sick. The error is traceable in London to St. Bartholomew's and St. Thomas', which were founded as priories, afterwards became hospitals, and have now become infirmaries, though still called hospitals. They might with equal propriety be called priories. In Scotland and Ireland, however, the term infirmary is correctly used. Thus, there is the Edinburgh Royal Infirmary, with 565 beds; the Glasgow Royal Infirmary, 547 beds; Aberdeen Royal Infirmary, 300 beds. The same journal suggests the change of name of St. Thomas' to that of "The Victoria Infirmary." Would it not be well for Philadelphians to remember this correct application of the terms in naming the new infirmaries proposed, as "The Infirmary of the Presbyterian Church," and "The University Infirmary," or "The Infirmary of the University of Pennsylvania"?

HUMORS OF VACCINATION.—Mr. R. Ellis, a surgeon, has invented a new method of vaccinating, and has written to the *London Times* that it never fails. He first of all makes one or two little vesicles with cantharides, and the next day applies the virus to the surface thus denuded of cuticle. A Mr. John Smith, M.R.C.S., in a letter to the *Medical Times and Gazette*, shows that this new method cannot be universally adopted, simply because the occupations of the poor prevent their frequent attendance upon dispensaries. It is extremely difficult to get them to come twice for the vaccination and inspection; and the necessity for an additional visit to be devoted to the preliminary vesication would still further increase this difficulty. "Would that Mr. Ellis," Mr. S. says, "had to look up an Irish 'widdy,' who, when upbraided with not coming on the eighth day, replied that she would not give up a day's 'choring' and let her children's bellies go empty for all the doctors this side of h——,'—a place which Pope's soft Dean would not mention to ears polite."

We find, also, the following, extracted from the Annual Report of the Trustees of the National Portrait-Gallery, in the *Medical Times and Gazette*:

"Dr. Jenner, although placed very high and in an unfavorable light, did not escape frequent observation. A woman, pointing to it, said to her girls, 'There's the one that's making such a lot of children suffer now from vaccination.'"

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending June 24.	July 1.
Consumption	40	35
Other Diseases of Respiratory Organs	24	11
Diseases of Organs of Circulation	10	14
Diseases of Brain and Nervous System	42	55
Diseases of Abdominal Organs	71	82
Zymotic Diseases	28	22
Debility	30	23
Marasmus	20	20
Cancer	4	7
Syphilis	1	0
Scrofula	2	0
Tetanus	0	2
Tumors	2	0
Old Age	4	6
Stillborn	10	25
Malformation	4	0
Casualties	6	8
Sunstroke	0	1
Intemperance	3	0
Unclassifiable	19	13
Unknown	1	5
Totals	321	329
Adults	145	123
Minors	176	206

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 19, 1871, TO JULY 3, 1871, INCLUSIVE.

WEBSTER, WARREN, SURGEON.—By S. O. 129, Headquarters Department of the East, June 20, 1871, assigned to duty as Post-Surgeon at Fort Independence, Mass.

BYRNE, C. C., SURGEON.—By S. O. 129, c. s., Department of the East, assigned to duty as Post-Surgeon at Willet's Point, N.Y. Harbor.

STERNBERG, G. M., ASSISTANT-SURGEON.—By S. O. 129, c.s., Department of the East, assigned to duty as Post-Surgeon at Fort Warren, Mass.

WINNE, C. K., ASSISTANT-SURGEON.—By S. O. 240, A. G. O., June 19, 1871, leave of absence extended 60 days.

JANEWAY, J. H., ASSISTANT-SURGEON.—By S. O. 129, c.s., Department of the East, when relieved by Surgeon Byrne, to comply with order of the War Department in his case.

HAPPERSETT, J. C. G., ASSISTANT-SURGEON.—By S. O. 129, c.s., Department of the East, when relieved by Assistant-Surgeon Gardner, to comply with order from the War Department in his case.

GARDNER, W. H., ASSISTANT-SURGEON.—By S. O. 129, c.s., Department of the East, assigned to duty as Post-Surgeon at Fort Washington, Md.

POPE, B. F., ASSISTANT-SURGEON.—By S. O. 237, War Department, A. G. O., June 17, 1871, par. 30 of S. O. 385, A. G. O., Dec. 31, 1870, honorably discharging him, is revoked.

HALL, JOHN D., ASSISTANT-SURGEON.—By S. O. 247, War Department, A.G.O., June 23, 1871, relieved from duty in Department of Arizona, and ordered to report to Commanding General Department of Dakota for assignment to duty.

GUNN, G. H., ASSISTANT-SURGEON.—Died at Fort Quitman, Texas, May 29, 1871.

MICHLER, W. H. H., ASSISTANT-SURGEON.—By G. C. M. Orders, No. 10, War Department, A. G. O., June 19, 1871, cashiered.

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THE MEDICAL TIMES.

TUESDAY, AUGUST 1, 1871.

ORIGINAL LECTURES.

TWO CLINICAL LECTURES

ON PELVIC PERITONITIS.

BY JOHN S. PARRY, M.D.,

Attending-Accoucheur to the Philadelphia Hospital.

LECTURE I.

GENTLEMEN: I am about to bring before you this morning two examples of a very common affection. The disorder has been produced by very different causes in the two patients, for one is a non-puerperal and the other a puerperal woman. The following is the history of the first case:

Emma M——, æt. 18, born in Germany, a prostitute and single. On January 10, 1871, she was admitted to the venereal wards of the hospital, under the care of my colleague, Dr. Brinton. When she entered the institution, she was suffering from gonorrhœa and chancres of three days' duration.

Her present illness commenced four weeks ago, or about February 21, and for three or four days before it began, the gonorrhœal discharge was very much diminished, if not entirely arrested.

When the disorder set in, she had sharp lancinating pain in the pelvis, with fever and a frequent pulse. The pain was continuous and not paroxysmal. Shortly afterwards it was discovered that the uterus was fixed in the pelvis. I now saw her at the request of Dr. Brinton, and made an imperfect vaginal examination, as the chancres had not healed.

The uterus was firmly fixed, with the os pushed backwards and towards the right. The tissues around the organ were much indurated, especially on the left side. The sensation imparted to the fingers was that of an ill-defined tumor in which the uterus was imbedded. Upon the left side the induration was continuous with an apparent tumor which was felt in the corresponding iliac fossa, and which reached a point just above the brim of the pelvis. The examination gave her great pain.

There was much tenderness over the hypogastrium and in both iliac fossæ, but especially on the left side. She suffered greatly from vesical tenesmus, and passed her urine frequently. Her bowels were regular, and she had no pain at stool. There was no pain in the leg, and it could be freely extended.

March 20, 1871.—Dr. Brinton transferred her to one of my beds in the ward for diseases of women. She was then thin, pale, and anæmic, but without fever. Her tongue was clean, bowels regular, and defecation painless. The vesical tenesmus was considerable. There was no pain in the lower extremities, and no retraction of either thigh. She still complained of pain in the pelvis, which had ceased to be constant, and was then distinctly paroxysmal.

Abdomino-vaginal Examination.—The abdomen is everywhere resonant on percussion, except in the left iliac fossa, in which there is an indurated mass which appears to rise up out of the cavity of the pelvis. The right boundary of this is a little beyond the median line. Its upper margin is about three finger-breadths above the pubis and Poupart's ligament. On vaginal examination, the uterus is found to be pressed backwards into the hollow of the sacrum; to be firmly fixed and surrounded by an indurated mass, which nearly fills the cavity of the pelvis. This is less developed upon the right than the left side, where it is continuous with the tumor in the left iliac fossa. Upon the right side, none of the structures outside of the true pelvis are involved, but upon careful bimanual palpation some deep-seated induration can be felt in the iliac fossa of that side. The tumor is exceedingly hard, nearly regular in outline, only slightly tender, and is easily reached by the examining finger. As previously stated, the uterus seemed to be imbedded in it.*

The important points in the clinical history just read, and the facts which it is especially desirable that you should remember, are the following: That the disease we are considering made its appearance during the progress of an attack of gonorrhœa; that it is an acute affection, attended with fever, sharp lancinating pain, and the development of an indurated tumor in the pelvic cavity, with displacement and fixation of the uterus.

Asking you to remember these statements, I will now introduce our second patient, and read a summary of her history:

A. W., æt. 21. On January 18, 1871, she was delivered of her first child, in the Obstetrical Department, by Dr. Davis, Resident Accoucheur. The labor was easy and normal, and she continued well for two days afterwards, when she complained of a dull pain in the middle line of the abdomen, just above the pubis. This pain was confined to the uterus, which could be distinctly felt through the thin abdominal walls, and which reached a point half-way between the pubic symphysis and the umbilicus. The uterus was tender upon pressure, but there was no evidence that the disease involved any of the parts around that organ. Both iliac fossæ appeared to be healthy. Her skin was cool, pulse quiet, the base of the tongue covered by a thin white fur, her appetite poor, and bowels constipated. The lochia were scanty.

Thirty-six hours later, without having had a distinct chill in the interval, she had fever, with dry but not very hot skin, flushed face, and a frequent, rather small, hard pulse. The pain in the pelvis was now severe, sharp, and lancinating. It was increased by moving, deep breathing, or coughing. The tenderness had extended beyond the uterus and involved the right iliac fossa, and she flinched when the slightest pressure was made over this part. The left was but slightly affected. Her tongue was covered with a white fur; appetite totally destroyed. There was nausea, and some, though not persistent or severe, bilious vomiting. There was considerable but not extreme tympany. Her bowels were constipated, and she suffered pain when they were opened. The quantity of urine was diminished. She voided it frequently, but had not much pain in passing it. She lay upon her back, with the limbs slightly drawn up or extended at pleasure. There was no retraction of the thigh.

Vaginal Examination.—Gave her great pain. The canal was very hot and dry. On the right side of the uterus the tissues were extremely tender, considerably thickened, and bulged downwards. There was no well-defined tumor. Attempts to move the uterus through the vagina gave her great pain. The lochia were nearly suppressed.

Treatment.—This consisted of a fever-mixture of ipecacuanha, neutral mixture, and spirits of nitric ether. Turpentine stupes were applied to the hypogastric and iliac regions, and she had introduced twice daily a vaginal suppository containing extract of belladonna.

During the next five days these symptoms continued. At this time the fever disappeared and the pain diminished greatly. At the end of another week she was able to sit up, though very weak. She continued to complain of pain in the hypogastrium, which was not continuous, but came on in paroxysms, sometimes daily, or she had intervals of two or three days' duration, in which she was quite comfortable. The frequency and severity of these paroxysms were increased by any exertion. There was at this time but little tenderness on pressure over the iliac and hypogastric regions, and convalescence seemed to be fairly established.

On February 25 she had a second attack, being seized quite

**Progress of the case.*—Shortly after this time the swelling upon the left side began to diminish, and gradually disappeared, while it increased in the right iliac fossa, and on April 20 extended above the brim. The uterus was then pushed towards the left side, where there was but little hardness. On May 25 she was discharged well, with the uterus completely adherent, with the os directed towards the left and almost in contact with the pelvic wall of that side. The displacement was a lateral version, the fundus being towards the opposite or right side.

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suddenly with fever, abdominal pain, and tenderness. Defecation was now extremely painful, and she complained of great irritability of the bladder. On the 26th and 27th of the month she had rather severe uterine hemorrhages.

Vaginal Examination.—The canal is hot and dry. The uterus is large, and by combined palpation is found to reach nearly half-way to the umbilicus. The os is pushed backwards and to the left side, in which position it is firmly fixed. The right lateral and anterior portions of the vaginal cul-de-sac are filled by a firm, hard, tender tumor, which is nearly regular in outline. The margins of the mass are sharply defined. The tumor is separated from the uterus by a narrow sulcus or furrow. It is easily reached by the finger in the vagina, and by bimanual palpation some hardness can be detected in the right iliac fossa, but there is no induration above the superior strait of the pelvis.

This paroxysm lasted about five days, when the fever again disappeared and the pain abated. After this she complained of weakness, and occasionally suffered pain, but was able to walk about until yesterday, March 24, when she had a third attack, with fever and pain.

Present Condition, March 25.—She is very pale and anæmic. Sclerotica pearly. Countenance anxious. Skin dry and hot. Pulse 120, weak and compressible. Respiration 20, not painful. Tongue covered with a thick yellowish-white fur. She has neither nausea nor vomiting, and but little tympany. The bowels are constipated, and defecation is exceedingly painful. She voids her urine frequently and with much suffering. The secretion is normal, except so far as it has been affected by the fever.

Vaginal Examination.—The uterus has not diminished in size since the last examination. It is firmly fixed, and the os, which is pressed back into the hollow of the sacrum, is slightly elevated. The induration upon the right side of and anterior to the organ has extended, and involves the left lateral vaginal cul-de-sac, filling it with a firm, hard tumor. Bimanual palpation reveals but little induration in the left iliac fossa, but upon the right the tumor now extends about two finger-breadths above the brim of the pelvis, and if pressure is made upon its upper surface, the impulse is perceptible to the finger in the vagina. The tumor, however, moves but slightly. It appears to rise up out of the cavity of the pelvis, and the abdominal walls move over it. No connection between it and the uterus can be detected. It appears to occupy the whole of the pelvic cavity to the right of the womb. The tumor is as dense as fibro-cartilage, and the inferior surface is slightly, and the superior more decidedly, irregular in outline. There is no evidence of fluctuation.*

To some of you, gentlemen, this history may appear somewhat minute; but every word of it seems to me to be important. I hope that the leading symptoms of the case are firmly impressed upon your minds, as it is an almost typical example of the disease which it is brought here to illustrate.

I desire to direct your attention to the following points: the acute character of the affection; the severe lancinating pelvic pain, with tenderness, first in the median line and confined to the uterus, and later in the right iliac fossa, followed by induration, which progressed until it produced uterine displacement and a pelvic tumor, felt successively in the right, the anterior, and the left sides of the vaginal cul-de-sac.

In many particulars the two cases which have been presented to you are alike. In both, the disease was acute. Both had fever and sharp lancinating pelvic pain and induration, with uterine fixation and displacement. In both, the swelling or tumor could be felt above the brim of the pelvis: in the former, on the left, in the latter, on the right side. The tumor thus produced was tender in the first stage of the disease in both patients, but in the second case also during the paroxysms. The tumor is exceedingly hard, and especially in the second girl it is as firm as a fibroid tumor. In neither can any connection between the diseased mass and the uterus be traced, for there is a narrow furrow or sulcus separating them, while the impression given to the examining finger in both instances is that the tumor projects from a portion of the uterine surface just beyond the point which we can touch through the vagina.

The two cases differ, however, in certain very important particulars, for the first patient is a non-puerperal and the second a puerperal woman. In the first, the disease pursued a uniform course and the pain was constant. In the second, the disorder is paroxysmal, and the exacerbations have occurred from the 20th to the 25th of the month for three successive periods. Because there are these differences in the clinical histories of these patients, and because the affection has occurred when the two women were in conditions as widely separated as day is from night, you must not be led into the error of believing that the disorder is not the same, for the nature of the morbid condition is alike in the two cases, though its cause is very different, and in one it is modified by the puerperal state.

In regard to the nature of the disease, there are three affections from which women may suffer and present symptoms such as have been detailed in these histories. They are pelvic hematocele, pelvic cellulitis (parametritis), and pelvic peritonitis (perimetritis); and it is now to be determined which of these affections we have to treat in these patients.

By pelvic hematocele is meant an effusion of blood into the cellular tissue around the uterus or upon the surface of the pelvic peritoneum. It is an acute affection, and is attended with pain in the pelvis, but, unlike the disease in these cases, it is at the outset unassociated with fever. Indeed, owing to the hemorrhage and the distention resulting from it, we would look rather for a cool than a hot skin, and for a feeble than a frequent, strong, full pulse. In both these patients fever was among the earliest symptoms. It is true that we may have fever in pelvic hematocele, but it comes on as a secondary symptom, appearing some hours or days after the commencement of the affection, as the result of the irritation produced by the effused blood. In pelvic hematocele we have a tumor, as in the patients before us, but this in the early stages of that disorder has not the characters which are so prominent in these cases. Instead of being hard, dense, and slightly irregular, it is soft and boggy, and impresses one with the idea that the pelvic peritoneal pouch is filled with a fluid or a soft solid. Moreover, the tumor in pelvic hematocele forms more rapidly than it did in these women, especially the second, in whom the disease had existed several days before there was any distinct induration. Lastly, the induration in both the cases before you occupies the lateral and anterior portions of the vaginal cul-de-sac, while in pelvic hematocele the retro-uterine pouch is the part chiefly and most frequently involved, and consequently in that disease the uterus is displaced in a direction precisely the opposite of that which it has taken in these women. Moreover, hematocele is a rare disease, and is apt to occur at the menstrual periods. Though not so stated in the history, the non-puerperal patient was not menstruating when she was taken ill. In view of these facts, we may therefore safely conclude that we have not in either of these patients an example of pelvic hematocele.

In speaking of the other two diseases, I feel that I am upon dangerous ground. Every characteristic feature of the illness of both of these girls points to the fact that the disorder is a pelvic inflammation,—that it is a cellulitis or a peritonitis, but it is exceedingly difficult to decide which.

Dr. Thomas, of New York, has carefully laid down points upon which the diagnosis is to be made, and in the original edition of his book upon Diseases of Women

* *Progress of the case.*—During the succeeding month she improved rapidly, and was discharged April 20, the intra-pelvic hardness remaining. That above the brim had totally disappeared.

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he stated positively, that "a neglect of such thorough diagnosis is as culpable as a similar want of care in determining between pericarditis and endocarditis." Dr. Thomas has reiterated this statement in the second edition of his work,* and I cannot but believe that, in making it, he has gone much too far; and, after a very considerable experience in the two diseases, in which I have tried to make the most of my opportunities, I am convinced that the diagnosis between pelvic cellulitis and pelvic peritonitis is by no means easy, and that it is often impossible to say which is present in a given case. I do not hesitate to say, further, that the symptoms and physical signs upon which Dr. Thomas lays so much stress are utterly insufficient to enable a physician to arrive at a correct diagnosis.

As Dr. Thomas' work is deservedly a standard authority, and one which is likely to fall into your hands at any time, it will not be amiss for us to study in detail the points upon which he bases his diagnosis and makes the singular statement just quoted from both editions of his book,—the latter published in 1869.

His table has been copied upon the blackboard before you:

Pelvic cellulitis.	*Pelvic peritonitis.*
1. Tumor easily reached; generally felt in one broad ligament, and may be felt above the pelvic brim.	1. Tumor very high, only in the vaginal cul-de-sac; does not extend above the superior strait.
2. Marked tendency to suppuration.	2. Suppuration rare.
3. Abdominal tenderness chiefly over one iliac fossa.	3. Abdominal tenderness excessive above the brim of the pelvis.
4. Tumefaction generally noticed laterally in the pelvis.	4. Generally noticed near or upon the median line.
5. No constitutional signs of peritonitis present.	5. Constitutional signs of peritonitis present.
6. Tendency to monthly relapses not marked.	6. Tendency to relapse every month very marked.
7. Retraction of thigh not rare.	7. Retraction of thigh never occurs.
8. Pain severe and steady.	8. Pain excessive and often paroxysmal.
9. Facies not much altered.	9. Facies very anxious.
10. Nausea and vomiting not excessive.	10. Nausea and vomiting often excessive.
11. Does not necessarily displace the uterus.	11. Always displaces the uterus.
12. Not accompanied by tympanitis.	12. Always accompanied by tympanitis.
13. Uterus fixed to limited extent.	13. Uterus immovable on all sides.

Positive as are these statements, and high as is the authority which has proclaimed them, I confess that I am unable to apply them practically at the bedside; and if you will examine Dr. Duncan's work† upon this subject, you will find that he makes the same acknowledgment. If we attempt to apply his elements of diagnosis in the two patients before us, I think we shall fail.

In both instances the tumor extends above the pelvic brim, which, according to Dr. Thomas, is in favor of cellulitis. In the first or non-puerperal woman this occurred early, for it was present at my first examination, while, in addition to this, a tumor was felt in the left vaginal cul-de-sac; in short, it filled the whole of the left half of the pelvis. You should remember, however, in regard to our puerperal patient, that induration did not extend above the pelvic brim until after the third paroxysm had supervened, and that previous to the second the hardness could not be felt except through the vagina, and from thence it extended up and advanced from the right to the left side. This slow progress, however, is not the constant history of pelvic peritonitis, for I have met with induration above the pelvic brim in several patients within a few days after the commencement of the disorder. Bernutz, whose name is so closely associated with this disease, states positively‡ that the tumor of a pelvic peritonitis may be felt, just as in both of these women, two or three finger-breadths above the superior strait; and he further says that this fact is of some importance in the diagnosis, because in peritonitis the abdominal walls move over the tumor, while in cellulitis the inflammation is apt to travel outward and involve the cellular tissue of the iliac fossa and the abdominal wall. Upon careful examination of both of these women, made as I now show you, the swelling appears to be seated entirely within the pelvic cavity. The parietes of the abdomen move over it as though they were in no way involved in the disease. Therefore, notwithstanding Dr. Thomas' declaration, I cannot but believe, after considerable experience, that the tumor produced by pelvic peritonitis not infrequently extends above the brim.

Dr. Thomas asserts that the tumor in pelvic cellulitis is "easily reached," while in pelvic peritonitis it is "very high, only in the vaginal cul-de-sac." The ease with which the pelvic tumor is reached depends much, if not entirely, upon the duration and severity of the disease, and upon the mode in which the examination is made. From the commencement of the illness of both of these women until the present time the tumor was easily reached through the vagina, and in the non-puerperal woman, in a very short time, by pressure downwards in the left iliac fossa.

The statements of our author in this particular are very loose. If he means that the tumor of cellulitis is easily reached through the vagina, his statements would mislead you, for induration in the vaginal cul-de-sac in peritonitis is very easily touched,—much more so than cellular swelling in the broad ligaments.

On the other hand, if Dr. Thomas intends to say that the cellular tumor is easily reached by pressure downwards in the iliac fossa, he may be equally in error, because the connective tissue of the broad ligament is not by any means the constant seat of cellular inflammation and suppuration in the pelvis, for it may be located beneath the peritoneum of any portion of the sides of the pelvis, or in the connective tissue at the side of the uterus, just opposite the lower portion of its body and upper part of its neck. In the former case the tumor may be as difficult to detect by pressure in the iliac fossa as by a vaginal examination; and in the single instance of the latter that I have ever seen (and the diagnosis was proved to be correct by autopsy) the swelling could be felt only by the vagina, in which manner it was easily reached.

You heard in the history of the puerperal patient that the tenderness was first noticed in the median line, and that it was distinctly uterine for two days. From thence it extended to the right iliac fossa. This is, I believe, the ordinary history of puerperal pelvic peritonitis, and a very important point is involved in it. Dr. Thomas states, however, that the tenderness is excessive above the brim.

The tumefaction, according to the same author, is generally situated in the lateral portion of the pelvis in cellulitis, and is near or upon the median line in peritonitis. In both the patients who have been presented to you to-day the swelling is more marked upon one side than upon the other,—on the left in the non-puerperal

* Diseases of Women, p. 380.
† Perimetritis and Parametritis, p. 199.

‡ Clinical Memoirs on Diseases of Women, p. 85, New Sydenham Society's Publications, 1866.

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and on the right in the puerperal woman; but in both it involves three sides of the uterus, displacing and immovably fixing the organ in both cases. It is, I believe, perfectly true that in cellular inflammation, whether it affects the broad ligament, or the tissue adjoining the lower portion of the body of the uterus, the tumor produced occupies the lateral portion of the pelvis. But it is not true that the induration of peritoneal inflammation is always situated upon or near the median line, though the statement is probably correct in the larger number of cases.

In both of these women, as you have already heard, the tumor occupies three sides of the uterus, but in one —the puerperal case—the induration was first felt low down in the right vaginal cul-de-sac. The statement of Dr. Thomas probably applies to a class of cases, and it may comprise the larger number, in which the recto-peritoneal pouch is the part primarily involved. In other instances, there is every reason to believe that the inflammation has its commencement in the peritoneum which covers the Fallopian tubes, the ovaries, and the broad ligaments, and that from thence it spreads downwards and towards the opposite side, until it involves a larger portion or all of the pelvic peritoneum. This may seem like a needless refinement, but the most careful and minute observation is the only means by which the subject will ever be liberated from the uncertainty and doubt which now surround it. I am convinced that in certain instances the disease has such a commencement, by several cases which have come under my observation. One such occurs to me at this moment. A woman, aged 49, was suffering from fibroid polypi of the uterus. Pelvic peritonitis supervened, and a tumor formed in the left lateral vaginal cul-de-sac. She perished from this, and at the autopsy we found an abscess situated behind the left broad ligament, pushing it forward, and shut off from the general peritoneal cavity by adhesions between the small intestines and the sigmoid flexure, above and between a fold of the ileum and the left margin of the enlarged uterus at the side. Before death, the pain and tenderness were so great that it was impossible to tell whether the uterus was fixed or not; but at the autopsy the enlarged organ was not materially pushed towards the right side of the pelvis, but was rotated upon its axis, the left margin being carried forward. Its mobility was somewhat impaired, but not entirely destroyed, while the pelvic tumor could be felt in the left lateral cul-de-sac and a little behind. Section of the body a little later proved the inflammation to have been entirely peritoneal. The tumor contained about four ounces of pus. If Dr. Thomas' statements are correct, cellulitis rather than peritonitis should have been diagnosed in this instance.

Dr. Thomas expresses the opinion that in pelvic peritoneal inflammation the characteristic constitutional signs of peritonitis are present. This is by no means always the rule. In neither of the patients who have been before you to-day were these at all marked, and in the non-puerperal woman they were entirely absent. Yet you may as well know now as later that I believe they both had perimetritis (pelvic peritonitis). This opinion that the peculiar phenomena of peritonitis may be absent is confirmed by numerous examples of the puerperal variety of the disease which have occurred in this hospital since January, 1870, and by repeated autopsies before and since that time. Indeed, one important fact in regard to the disorder is that it may be latent, as has been shown by numerous observers, and as you may see for yourselves if you will study the previous histories of the patients, and then attend the numerous autopsies made in the dead-room just without this amphitheatre.

In the history of the puerperal woman who has been before you, you have heard a very distinct account of periodical exacerbations of the pain, tenderness, and fever recurring about the 25th of every month. Dr. Thomas calls attention to the diagnostic value of these relapses in peritoneal inflammation, and in this he is in the main correct. In cases of cellulitis, the nature of which I have proved by autopsy, marked monthly relapses have not occurred, while in peritonitis these are of a very common occurrence, but may be absent, as in our non-puerperal patient.

Retraction of the thigh, the same authority states, is not rare in cellular inflammation, and never occurs in peritonitis,—an opinion which my own experience confirms; but it has happened that in three cases of puerperal pelvic cellulitis which occurred in the wards during the last year, and the last three which I have confirmed by autopsy, retraction of the thigh was not present, though there were abscesses in the cellular tissue. I would have you remember Dr. Thomas' own words, that the symptom is "not rare," and I would add that its absence does not necessarily militate against the existence of cellulitis.

Is it worth while, gentlemen, to pursue this discussion any further? I believe that enough has been said to prove that, able as he is, positive as his statements are, Dr. Thomas has not pointed out the way in which we are to go to distinguish pelvic cellulitis from pelvic peritonitis.

This position is taken with all due deference to the learned gentleman and the successful writer and clinical teacher who has been quoted, but it is done because I have failed, after having honestly tried to apply the elements of diagnosis which we are discussing at the bedside, and because I think that clinical experience and post-mortem observation have proved the unreliable nature of his diagnostic characters. I hesitate less in making this acknowledgment because Dr. Mathews Duncan, of Edinburgh, in his work on "Perimetritis and Parametritis,"* writes that he has met with the same difficulty.

I fear, however, that I have nothing better to offer you. The opinion that these are both cases of pelvic peritonitis has already been expressed, and is based upon the following facts:

1. The extreme suffering produced by any attempt to move the uterus (in vaginal examination) even in the early stages of the disease.

2. The fixation of the uteri of both women, which happened early in the disease.

3. The displacement of the organs, which is great in both patients.

4. The extent of the inflammation, and the fact that the inflammatory tumor involves three sides of the vaginal cul-de-sac.

5. The absence of marked tendency to suppuration.

6. The fact that peritonitis is a much more frequent affection than cellulitis. This remark is especially applicable to our non-puerperal patient, in whom the diagnosis is the more difficult. It is an established fact, however, that pelvic peritoneal inflammation is a very common affection in non-puerperal women, while cellulitis is an exceedingly rare one.

7. In the other woman (puerperal), the monthly relapses are important in diagnosis, and support the opinion in favor of peritoneal inflammation.

It must be admitted, however, that these signs are very unreliable, and that in the present state of our knowledge one must hesitate about stating the grounds upon which he bases his conclusions. It is my strong conviction, too, that cases will frequently occur in which you will be unable to decide the true nature of the disease, for the simple reason that cellular and peritoneal inflammation are combined. I have met with several

* Page 197.

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such in which abscesses of the cellular tissue, accompanied by peritonitis, were found at the autopsies.

There is much about both of these affections which is yet to be elucidated, and it may be for some of you to describe the characters which will dispel the doubt and uncertainty which now overshadow them. I commend the subject to you, not only on account of the great frequency, and hence great importance, of these affections, but also on account of the extreme interest which they possess. Practically it is no serious matter to be unable to distinguish peritonitis from cellulitis, for our therapeutics are not now sufficiently precise to enable us to adopt very different treatment for the two diseases.

ORIGINAL COMMUNICATIONS.

THE WEST PITTSTON DISASTER.

BY J. T. ROTHROCK, M.D.,

Wilkesbarre, Pa.

ON May 27, 1871, at 2.40 P.M., smoke was discovered issuing from the top of the coal-mining breaker worked by Blake & Co. In half an hour the entire building was wrapped in flames. It was situated immediately over the mouth of the shaft (280 feet deep) by which the mine was entered; and when the car ascended for the last time, thirty-eight men remained below. No second shaft existed for the entrance of air or for the escape of the men. Hence the provision for proper ventilation of the mine was at best inadequate. It appears to be admitted on all sides that there was not air enough for more than twenty men while the shaft was intact and the fans working; yet nearly double that number were confined there at the time of the accident, under circumstances the most unfavorable to life. The intelligence of this fearful disaster (second only to that of Avondale in the mining history of the country) spread from point to point along the lines of telegraphic communication, and soon thousands of men were assembled on the spot, either for the purpose of aiding to rescue the imprisoned men, or for that of gratifying an idle curiosity.

About 2 A.M., or twelve hours after the fire began, the first man was rescued. The last was taken out seven hours later.

Now that the excitement has subsided, we may ask ourselves, What have been the medical lessons taught by this appalling accident? Of the thirty-eight men left in the mine, seventeen were taken out dead and twenty-one alive,—some three or four of these dying subsequently.

To what was death due in those who succumbed before reaching the surface? Was it to the inhalation of carbonic acid or carbonic oxide? The conditions for the generation of both were present in the burning shaft. Perhaps we may eliminate the latter from the problem when we remember its promptly poisonous action in even small quantity, and bear in mind the fact that some men were taken out alive after from sixteen to nineteen hours' confinement. Or was the mortality due to the draught caused by the burning breaker and shaft abstracting the atmospheric air,—or to this plus the subsequent accumulation of animal exhalations,—or to all combined? The last is probably the correct view. When the men below understood the state of affairs, they immediately began to erect barricades, to prevent the ingress of smoke and the egress of air. This done, they took refuge behind the second or innermost one; and, so far as we can learn, these barricades did, to a certain extent, answer the purpose for which they were intended. Two men went at a time to the outer barricade, to listen if any efforts were made for their relief. Now, from the statement of Robert Smallcombe, it appears that Morgan and Curtis were the first to become insensible, they being found at the outer barricade: the former alive, the latter dead, with his face in the water,—evidently drowned. Granting that these men were the first to lose consciousness, why was Morgan rescued alive? We imagine, because he was so near the foot of the shaft,—the place from which the air was first abstracted being the place to which it would first return when the fire was extinguished and the communication with the surface established. That a certain quantity of air reached the bottom of the shaft, and, indeed, remained there throughout, we may infer from the fact that at 1.30 A.M., when the first relief-party descended, they saw a live mule standing on the track, and a kerosene-lamp burning, while we are told by Thomas Savage that as late as 10 P.M. the lamps behind the inner barricade were burning dimly. The stream of water running through the mine appears to have had a preservative influence, as the Smallcombe family, who lay down by its side, "*drinking a little of it occasionally*," were the last to become insensible.

When rescued, the condition of the survivors was as follows: Pulse feeble, slow, and intermittent. Respiration slower than normal, and interrupted apparently by spasmodic closure of the glottis. (One man on recovering stated that his most unpleasant sensation was a feeling of soreness or constriction about the throat, as if he had been choked.) The breathing was stertorous. The pupils were dilated or contracted, seldom natural. There was certainly engorgement of the lungs, and probably congestion of the brain or its meninges. Some of the patients, shortly after they were rescued and actively treated, could be roused to look about them for a moment, and, perhaps, to answer a question in a mechanical sort of way, but would relapse immediately afterwards into profound stupor. Trunk and extremities were cold.

In the *ensemble* of symptoms we recognize more than simple asphyxia, or its equivalent, apnœa,—*i.e.* simple deprivation of atmospheric air. In addition to this there was narcosis and its accompanying coma. Dr. Dennis observed this at once. The narcotizing agent must have been carbonic acid. We may safely infer that death began at the brain, for the sensorial functions were first of all abolished, the condition of coma being quickly followed by apnœa proper, the burden of the former falling upon the brain, of the latter upon the heart and lungs,—which continued to act after all sensibility to external impressions was lost. It is noteworthy that the mortality among the plethoric was fearful, while the more spare gave a good percentage of recovery. To this general proposition there were exceptions, but it is true in the main. When the first class were brought out alive, there was an apoplectic cast about them, which correlated the narcosis with profound stupor and a tardy restoration to consciousness. The second class rallied much more promptly. This is quite in accordance with the well-known fact that the effects of confined air do not so speedily manifest themselves on the weak as on the strong,—on the female as on the male. It is also probable that the temperature of the mine had something to do with prolonging life under such unfavorable circumstances. Had the temperature been some degrees lower, it is not likely a man would have reached the surface alive. The gradual change from pure to impure air also tended to induce a tolerance of the vitiated air.

It is a matter of great regret that no post-mortem examinations could be obtained, and we are consequently unable to reason from demonstrated pathology. The sudden transition from the mine to the surface

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seemed for the time to aggravate all the alarming symptoms. Hence, had it been possible, it would have been better, perhaps, to have limited the access of the air to the lungs at first. A few of the men vomited a dark, glairy, frothy fluid, and seemed relieved by it.

The treatment consisted in the usual restoratives,—*i.e.* diffusible stimulants, hot applications, friction, etc. Though these saved a number that must have died but for their use, their action was at times extremely slow. Narcosis was the cause of an apoplectic condition, for which no stimulant could do more than sustain the powers of life until the poison passed off.

Phlebotomy now suggests itself as a probable step in the right direction for the worst of these cases; not abstraction of blood in the stinted measure of cupping, but in a full stream from the jugular vein, the amount taken to be regulated entirely by the effect produced. Thus the pressure on the brain from the blood, which was dammed back from the right side of the heart, would have been removed, and with the flowing blood there would have been abstracted also a large measure of the narcotic poison,—carbonic acid. In the venous blood of health there is about five times as much carbonic acid as oxygen: how much greater must the proportion have been in these sufferers! Granting, too, that carbonic acid is the natural stimulus to the medulla oblongata and to the right side of the heart, in normal quantity, *it by no means follows that it is so when present in overwhelming proportion.* Opium in small doses is a cerebral stimulant, yet increase the dose, and narcosis supervenes. In this connection it may be remarked that at one time there were not wanting good authorities to suggest that the narcosis produced by opium might be due to retention of carbonic acid in the blood.

As regards the effect of free bleeding upon the engorged pulmonary capillaries, nothing can be more to the point than these quotations: "An essential fact in asphyxia is the retardation and subsequent arrest of the movement of the blood through the pulmonary capillaries," and "the relief or removal of that condition is the turning-point of success in all attempts at resuscitation."—(*Marshall's Physiology*, American edition, 1868, p. 857.) "If, indeed, the state of over-distention be relieved by puncturing the right auricle or the great veins, the right ventricle will begin to contract, while the left ventricle may once more be excited by duly-arterialized blood."—(*Marshall*, p. 851.) These quotations refer to a state of complete, or nearly complete, asphyxia, when the heart has just ceased to beat, retaining, however, its contractility, providing the tension be removed. But surely they are as applicable to the less marked cases of which we now write. Small and uncertain as was the pulse in the Pittston sufferers, there would have been no more danger to the patient from free venesection than in those cases of puerperal convulsions attended with a like condition of pulse. There are few physicians of any extended experience who have not seen the pulse of the eclamptic parturient female become large, soft, and regular as the blood flowed in a full, free stream. In many respects the symptoms simulated those of eclampsia gravidarum, and only served to connect by a stronger parallelism the indication for a similar treatment.

If venesection had started the circulation, would it not also have caused an alarming condition like that induced by a too sudden exit from the mine into the air? We think not; for in the latter case the imperfectly-aerated blood, charged to repletion with carbonic acid, was thrown again and again upon the lungs, to have its poison slowly eliminated by them, whereas venesection, removing more of the poison than of oxygen, must have in so far tended to relieve that very condition. The one case would have been a restoration to air with the cause of the trouble remaining,—the other, with it removed; and, such being the case, there was no legitimate ground for the inference that this danger would have followed the opening of a vein.

It is a matter of regret that the attention of the physicians was so exclusively required by the living as to leave no time for attention to those in whom life was apparently extinct. We have no ground of hope that any of those who reached the surface with the action of heart and lungs stopped could have been restored. The history attending the recovery of the survivors banished all hope for the others.

Throughout the whole of the terrible scene the physicians from Pittston and neighboring towns were on the spot, rendering prompt, cheerful, and invaluable assistance.

MEDICAL NOTES.

No. III.

BY JAMES E. REEVES, M.D.,
Wheeling, W. Va.

III.—Scarlet Fever.

THERE is probably no disease which ends fatally in so many different ways as scarlet fever,—no disease in which in its very beginning death may more suddenly and unexpectedly occur. Sometimes in the very midst of artless merriment and play, the patient is convulsed, struggles a moment, and is dead! In other cases the disease is so mild that its subjects are not thought sufficiently sick, by their parents or friends, to be confined to the house, much less to the bed. Again, the attack may be seemingly of moderate severity, and yet the patient is cut off by closure of the throat from the intensity of the inflammation, or by exhaustion and sudden yielding of the vital powers. And even should the beginning of convalescence be reached, there are still numerous dangers in the progress towards health,—dropsy, abscesses about the neck, etc.,—which, if they do not fatally interrupt the process of recovery, may scar and cripple the patient for life. There are but few children, indeed, that have passed through a severe attack of scarlet fever who do not in some form carry with them ever afterwards through life the *impress* of the dreadful malady.

The best general plan of treatment for the largest number of cases is—

1. Confinement in well-ventilated apartments, and the observance of perfect cleanliness. From first to last, feed the patient bountifully.

2. The tepid bath once or twice a day, or the warm bath in the beginning, and the administration of stimulant medicine, if reaction is tardy or imperfect.

3. In many cases the following mixture of muriate of ammonia and chlorate of potash is the only medicine required to conduct the case to speedy convalescence:

℞.—Ammon. Mur., gr. xxx;
Potass. Chlor., gr. xxv;
Aquæ,
Syr. Simplic., āā, ℥j. M.

S.—A teaspoonful every hour or two for a child four or five years of age.

Or the chlorine and iron mixture may be substituted for the above (see treatment of diphtheria, Notes No. II.), and used as a gargle or in atomized spray, as well as administered in the dose of from twenty drops to a teaspoonful every hour or two, according to the urgency of the case and the age of the patient. If inclined to constipation, the bowels should be kept open by the citrate of magnesia, or by some other simple laxative medicine.

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4. Warm wet cloths, folded on oiled silk, should be kept constantly applied to the throat. Cold water and milk for drinks.

5. Bromide of potassium, to diminish nervous impressibility.

6. Diuretics, iron, quinia, wine, warm and sufficient clothing.

7. The sequelæ must be treated as they present themselves: each trouble has its own indications for treatment.

8. Finally, I submit that, notwithstanding the great dissimilarity of scarlet fever and diphtheria, the successful treatment of the one has much in common with *best treatment* for the other. Feed the patient, and thus "keep him alive until he recovers."

IV.—Cholera Infantum.

This constant summer visitant of all cities and towns constitutes the chief source of mortality among children during the period of first dentition. Indeed, its prevalence is a most unerring sanitary monitor, and when the little ones perish, there exists danger to the health of the surrounding population.

The most satisfactory plan of treatment, according to my experience, is the following:

1. If the case is ushered in with frequent vomiting and purging,—in a word, should collapse be threatened in the beginning, as frequently happens,—external warmth, sinapisms, milk-punch, chloroform, etc., are absolutely essential to the life of the patient. It is well known that vomiting is one of the most obstinate symptoms belonging to the disease, and sometimes diminishes more than diarrhœa the chances of recovery. Not only is there the almost instant ejection of nutriment, but also of the medicine on which the safety of the patient depends. To relieve this symptom, I am in the habit, first, of giving the following mixture:

℞.—Plumbi Acet., gr. xij;
Morph. Acet., gr. ss;
Sacch. Alb., ʒiss;
Aceti Destil., ʒss;
Aquæ, ʒij. M.

S.—A teaspoonful to a child from one to two years of age after each act of vomiting.

Should this fail to quiet the stomach, then from ten to fifteen drops of the "*chloroform paregoric*" in a spoonful of ice-water may be given every half-hour. This dose I have found to act promptly in many cases in which the lead mixture had entirely failed to impress the stomach.

2. So soon as the vomiting is controlled, the subnitrate of bismuth, in the dose of from three to five grains, should be administered:

℞.—Bismuth. Subnitrat., gr. xxxvj;
Cretæ præparatæ, gr. xx;
Pulv. Doveri, gr. v. M.

Make twelve powders.

S.—One every three or four hours, and continued until convalescence is fully established.

In very many cases the bismuth may be exclusively relied upon for the cure of cholera infantum. Indeed, it is capable of accomplishing more general good in this disease than any other remedy or combination of remedies with which I am acquainted. For many years I have employed it not only in the disease under consideration, but also in every form of infantile diarrhœa, and with the most gratifying results.

3. The daily tepid bath, alimentation, and an abundant supply of pure air are important elements in the management of the disease. Nothing in the way of food should be inhibited which the appetite craves and the stomach will receive kindly. I am well convinced that injury has often been done by confining the little sufferers to a milk diet, under the mistaken idea that the stomach should not or cannot take anything else. Ice-water, animal essences, ripe fruits, and vegetables are not less useful and grateful to sick children than to adults. The caution should be more as regards quantity than quality. In chronic cases, accompanied with debility and marked emaciation, quinia and cod-liver oil may be administered. The latter generally agrees well with the stomach, if the bismuth is at the same time employed. If the oil cannot be taken by the stomach, it should be employed by inunction.

V.—Pneumonia.

In the treatment of this disease, general bloodletting is now scarcely employed; and even cupping has gone out of use,—if not entirely, to such an extent that it has become a very unusual resort in practice. I am sure I have not bled a patient from the arm in the last ten years. Neither are blisters and pustulating oils and ointments so frequently employed as formerly; and I am confident that at least this very great change in practice has not been followed by an increased death-rate. And it is a further well-known fact that under the influence of this modified plan of treatment—veratrum viride, chlorate of potash and muriate of ammonia, quinia, iodide and bromide of potassium, rubefacients, fomentations and the oiled-silk jacket, beef-tea and wine—the average duration of the disease, including also the period of convalescence, has not been prolonged.

There are exceptions, however, to all rules, particularly in medical practice; and in almost every community there may yet doubtless be found the Doctor Van, who, regardless of the piteous cries of faint-hearted men, women, and children with tender skins, adheres strictly to *first principles*, and in cases of

"Lung-fever threatening,—something of the sort,—
Out with the lancet! let him blood,—a quart;
* * * * *
Ten leeches next will help to suck it out;
Then clap a blister on the painful part,—
But first two grains of antimonium tart.;
Last, with a dose of cleansing calomel,
Unload the portal system,—that sounds well."

(To be continued.)

AN UNRUPTURED HYMEN COMPLICATING LABOR.

BY P. S. LEISENRING, M.D.,
Annville, Pa.

On the morning of May 27, 1871, I was called to see Mrs. B. in her first confinement. She is a well-formed, healthy woman, aged 28; has been married over two years, and has always enjoyed good health, except at her menstrual periods, when she has suffered greatly. On my arrival, I was told that she had been in labor for several hours. I found her pains regular and tolerably severe. In attempting to make an examination, I was very much surprised at finding the vagina completely closed by an *unruptured hymen*. I carefully examined for an opening large enough to insert the end of my finger, so that I might enlarge it sufficiently to make the necessary examinations and deliver the child, but could find none, the hymen forming a complete septum, closing the vagina with a dense, thick, unyielding membrane, through which I could feel what I supposed, and afterwards proved, to be the head of the child. After using considerable force with my finger to rupture the hymen, and failing to do so, I explained to the family the nature of the difficulty, and informed them that the only remedy was an incision, assuring them that there was no cause for alarm. On making a careful ocular examination, I found about the

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centre of the membrane a small orifice, large enough (after some effort) to introduce an ordinary female catheter. I inserted a grooved director, and with a sharp bistoury made two incisions large enough to introduce my finger, with which, after considerable effort, the opening was gradually enlarged. I found the *os tincæ* dilating nicely and labor progressing favorably. After five hours of severe labor (the external parts being excessively rigid), I delivered her of a plump, healthy, female child. She had a speedy recovery.

In upwards of nineteen years of active practice, this is the first case of the kind I have met with; and on inquiring of a number of old practitioners, I learn that none of them has ever met with a similar case. I find, also, that most of the authors on obstetrics do not mention an unruptured hymen as one of the causes of difficult labor. Ramsbotham, in his excellent work, mentions but two cases having been met with in his own and in his father's practice. Dewees mentions having been called in consultation to one case. Bedford and other authors do not refer to the matter at all. I can scarcely understand how my patient became impregnated through so small an opening. It proves beyond a doubt that an *unruptured hymen is not an infallible test of virginity*. Although my patient had been married for more than two years, neither she nor her husband knew of the existence of the hymen.

CATARRH OF TYMPANUM FROM USE OF THUDICHUM'S NASAL DOUCHE.

BY GEORGE C. HARLAN, M.D.,

Surgeon to Wills Ophthalmic Hospital.

J. B., a conductor on one of the city cars, had been in the habit, for the relief of a chronic nasal catarrh, of passing a stream of salt water through the nares by means of Thudichum's douche,—usually daily, sometimes several times during the day,—for more than two years. Two weeks before he called at my office, it occurred to him that the efficiency of the application might be increased if he could "get the wash higher up in his head." He accordingly proceeded to stop the flow from the free nostril by pressing his finger against it. A stinging pain in the left ear immediately attested the success of the experiment. He suffered intense pain during the night, and increasing agony the next day, until, at the end of twenty-four hours, sudden and great relief accompanied the appearance of a discharge from the meatus. When I saw him, there was still great pain, with a high degree of deafness, and a "constant roaring, like the escape of steam, in his ear." My watch could be heard only when pressed against the ear. The membrane was congested, dull, and opaque, and the Eustachian tube was impervious by the Valsalvian method. Air could be forced into the tympanum by the Politzer inflator, which increased the hearing-distance for the watch to four inches. Under the use of a gargle to the throat, warm douche to the meatus, and "air-bath" to the tympanum, he is improving rapidly, and is likely to regain the full use of the organ.

Of course, the Thudichum apparatus cannot be held responsible for the mischief in this case, but, as the patient was by no means devoid of intelligence, his experience shows the necessity of giving strict and minute instructions when we intrust its use to unprofessional hands. Quite a number of similar accidents have now been recorded, some of them so serious as to endanger not only the patient's hearing, but even his life, and some surgeons have been induced to condemn the use of the apparatus altogether.

As first shown by Weber, when this means of passing a stream through the nasal passages is used, the posterior nares and the upper part of the pharynx are closed in by the drawing upwards of the soft palate. The tensor and levator palati muscles must therefore be in action, and the mouths of the Eustachian tubes held open. The only reason, then, why a part of the fluid used does not always enter the middle ear seems to be that there is a free and ready escape for it through the nostril, while to enter the tympanum it must ascend slightly and force its way through a narrow passage into a cavity otherwise closed and filled with air. When the membrane is destroyed, the stream may be made to pass out through the external meatus. Indeed, when both membranes are perforated, this means might perhaps be used for washing out the middle ear. It would have one advantage over the valuable method recommended by Hinton, of passing a stream in the opposite direction, which I am in the habit of using frequently, and with very satisfactory results, in the fact that the stream would enter by the narrower passage of the Eustachian tube, and pass out by the wider one of the external meatus.

In the present case the bottle was raised about four feet above the patient's head, and the nozzle of the tube was fitted in the right nostril. The right ear escaped, and the fluid entered the left probably because the head was inclined to the left side. It is easy to hold the head in such a position that gravity will favor the passage of fluid into the Eustachian tube rather than through the nostril.

I believe that the causes of this accident, which has brought discredit upon a means of cure or palliation that is very valuable in a large number of cases and can scarcely be replaced in many, are too much force and volume of fluid, some obstruction to its escape from the free nostril, and a lateral inclination of the head. The first and third are very easily guarded against. In regard to the second, it is quite conceivable that one of the large plugs of inspissated discharge, that are frequently washed out in bad cases of chronic naso-pharyngeal catarrh, might become impacted in the meatus and obstruct the flow. The danger from this, however, is slight, if we resist the temptation to increase the force of the stream by raising the bottle.

A CASE IN WHICH THERE EXISTED GREAT INTOLERANCE OF IODIDE OF POTASSIUM.

BY JAMES D. McGAUGHEY, M.D.,

Greeneville, Tenn.

I WAS called to see Eva H——, aged 24 years, who has been suffering some length of time from an injury of the spine, with paroxysmal attacks of painful micturition and derangement of the digestive organs. She was also troubled with a kind of neuralgic rheumatism, which affected alternately the head, kidneys, and other portions of the economy. She was taking iron at the time of my visit, in consequence of her anæmic condition and of some manifestations of a scrofulous diathesis. I prescribed for her the following mixture, to be taken three times daily:

℞.—Potass. Iodid., gr. x;
Potass. Acetat., gr. v;
Liq. Potass. Arsenit., gtt. j. M.

About half an hour after swallowing the first dose, the throat commenced to get dry and painful; the power of articulation was lost; the neck began to swell on both sides, until there was no depression beneath the inferior maxilla; the *salivary glands became exceedingly active*, pouring forth an abundance of saliva.

Cerebral symptoms soon after presented themselves, the patient becoming delirious. I was immediately sent for, but, the patient being eight miles in the country, it was some time before

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I saw her. She was then calm, the parents in the mean time having given castor-oil and turpentine. The delirium was gone; the saliva was no longer poured forth so abundantly; the swelling of the neck had subsided considerably, though still apparent to the eye; and the power to articulate was restored. On examining the fauces, I found nothing but redness of the mucous membrane; the tongue presented nothing peculiar.

I was puzzled to know the cause of such a terrible paroxysm; and, although it came on half an hour after the first dose, I was unwilling to ascribe it to the prescription; but the family were firmly persuaded that "the medicine did it." After satisfying myself that the prescription had been properly compounded, I ordered another dose to be given; it was followed by a full repetition of the paroxysm of the previous night. Feeling assured that the patient was the subject of an idiosyncrasy which prevented her from taking some one of the components of the prescription, I ordered it to be discontinued.

About six weeks subsequently, the patient's father came into my office for another prescription. I ordered for her iodide of potassium, gr. x, in syrup of stillingia. One dose of this produced dry throat, loss of articulation, swelling of the neck, tremendous salivation, and delirium, which symptoms passed off in four or five hours,—the parents administering oil and turpentine as before. I now became satisfied the iodide of potassium was the sole cause of the whole concatenation of symptoms, as there was no stillingia in the former prescription; and I now avoid its use in this patient, as I believe a dose of thirty or forty grains would produce fatal poisoning.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, MAY 31, 1871.

Reported by Dr. Elliott Richardson.

NECROSIS OF FEMUR.

SAMUEL D——, aged 41 years, presented a marked enlargement of the left thigh, with a sinus pouring out a fluid which by its character indicated inflammatory disease of the bone, a condition which was apparently the result of a compound fracture of the femur, received seventeen months ago.

On the introduction of a probe, it came in contact with dead bone, detached, and ready for removal.

The patient was unable to flex the knee, a condition which, as the patella was found to be free and movable, Prof. Agnew thought was due to bony thickening about the joint, and that on removal of the necrosed portion of the femur its usefulness would probably return.

The patient not being prepared to submit to an operation, it was deferred.

HYDROCELE WITH COMPLICATIONS.

This patient, forty-four years of age, had a swelling of the right scrotum.

This swelling was confined to the region of the testicle, and did not extend along the cord to the abdominal ring. When the patient coughed there was no succussion perceived. On a recumbent position being assumed, there was no retrocession of the tumor, nor could the finger be introduced into the abdominal ring. In the absence of all these symptoms of hernia, the next consideration was, as to the portion of the scrotal contents affected. The tumor was not firm enough for disease of the testicle. It had not been examined by transmitted light, but had the external appearances of hydrocele; and, as there was some sensation of fluctuation, an exploring-needle was introduced (a procedure which should always be adopted where there is any doubt of the nature of an enlargement), and a straw-colored fluid escaped. A trochar and canula were now introduced, and a moderate amount of serum was drawn off. After this fluid was removed, an induration or enlargement of the vas deferens was distinctly felt, and also a tortuous and dilated condition of the veins, which seemed to be glued together.

Prof. Agnew thought this condition of the parts was probably the precursor of future trouble of a serious nature in the testicle, which might be hastened by the injection of tincture of iodine,—a treatment which in all cases of uncomplicated hydrocele offers the best prospect of effecting a permanent cure. It was therefore in this case omitted.

This patient had presented himself at the University Surgical Dispensary about two weeks before this operation, having at that time a much larger hydrocele of the left side than that of the right.

The fluid was drawn off by Dr. Hunter from the left side, and a diseased condition, similar to that described as existing on the right side, but of smaller extent, found to exist.

ANCHYLOSIS OF METACARPO-PHALANGEAL JOINT.

This boy, by occupation a moulder, received in December, 1870, an injury of the soft parts of the right hand by the explosion of a pistol. This was followed by inflammation of the metacarpo-phalangeal joint of the index-finger, and subsequently by complete anchylosis.

After an examination of the hand, Prof. Agnew concluded to perform a resection of the anchylosed joint, with a view to produce a false joint, and thus enable the patient to bring the finger in contact with the thumb. The operation consisted of an incision, one and a half inches in length, over the dorsal aspect of the affected joint down to the bone, and the removal of the head of the phalanx, with the division of some dense bands of tissue surrounding it.

One silver suture was introduced, closing the upper portion of the wound, and a dressing of lint, saturated with a dilute tincture of opium, was applied.

BALANITIS.

The patient was a man, aged 21 years, who presented some symptoms of vesical calculus,—incontinence of urine, pain on passing water, and sudden stoppage. The microscopic examination of his urine did not, however, confirm this diagnosis. Prof. Agnew then proceeded to examine the patient, and on retracting the redundant prepuce an inflammatory condition of its mucous surface and that of the glans and corona glandis was discovered. The lecturer said that inflammation in the localities here mentioned will often give rise to all the above symptoms of vesical calculus, so that an exploration of the bladder is necessary in order to make a diagnosis.

Several ounces of tepid water were injected into the bladder, and a sound was introduced, but no abnormal condition could here be detected.

The patient was advised to have a portion of the prepuce removed.

DEFORMITY OF HAND FROM CICATRIX.

This case was that of the patient operated upon at the University by Prof. Agnew two weeks ago, for deformity of hand from cicatrix following a burn, and reported in *The Medical Times* for July 1.

It will be recollected that the constricting bands were divided and the fingers brought out to a straight position.

The wounds were healing very nicely, presenting healthy granulations, with a border of new skin covering the greater part of each wound. Dry dressings were now being used. The hand and forearm had been kept closely bound to a straight anterior splint since the operation, and the fingers retained in good position. The operation has been attended with entire success, and the boy will have a very useful hand.

STRICTURE OF URETHRA.

The patient, a man, forty years of age, had incontinence of urine, and when making an effort to pass water it issued in a small, scattered stream, projected with little force. He had also a purulent discharge, either from gonorrhœa or stricture.

Prof. Agnew introduced a large-sized bougie, and passed it freely down to the sinus of the bulb, where he found a tight

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stricture, just in front of the membranous portion of the urethra. He then introduced a small bougie, using no force.

The stricture was found to be a very tight one, and, as the man was in a bad condition, the operation was not pressed further at this time.

The lecturer said it was not always possible to pass a bougie through a stricture, even when urine trickled through, though gentle and patient efforts should be made from time to time. Should these ultimately fail, then it might be proper to attempt internal urethrotomy,—an operation, however, demanding the utmost care. As the patient was very much out of health, he was placed upon a course of tonic treatment, and ordered to return in a week or two, when efforts would be made to pass the stricture and dilate it; failing in which, the obstruction would be divided.

PHILADELPHIA HOSPITAL.

PSEUDO-PREGNANCY—NERVOUS PALPITATION OF THE ABDOMINAL AORTA.

SERVICE OF DR. JOHN S. PARRY, ATTENDING-ACCOUCHEUR, DECEMBER 16, 1870.

BRIDGET M——, æt. 22, a domestic, single, temperate, was born in Ireland. She was admitted to the Philadelphia Hospital supposing herself to be pregnant. Her menses first appeared when she was 17 years old. She was usually unwell about three or four days at her menstrual periods, and did not lose a very large quantity of blood. She had intercourse for the last time on the 13th of April last, and once before in the same week. Since that period she has been regular in menstruation as to time, but only sick one day; lost but little blood, and complained of much pain in the lower part of the abdomen, thighs, and back.

On the 17th of April she complained of sickness of the stomach in the morning, and since that time has suffered from nausea immediately after rising, but has rarely vomited. Four months and four days after intercourse, she noticed, as she thought, some enlargement of abdomen, chiefly in the centre, and at that time says she quickened. The movement which she described as quickening was felt alternately in the right and left iliac fossæ; afterwards in the centre of the abdomen up to the ensiform cartilage; she could feel it with her fingers, was conscious of it when pursuing her ordinary avocations, and the motion was increased by excitement, fright, or eating a full meal. This movement always occurred along the aorta or its great branches.

At this time she dressed very tightly, in order to conceal her condition. In this she even went so far as to cut her sides with tight bandaging. After she was five months gone, as she supposed, she began to starve herself, often taking but a cup of coffee for breakfast, always stinting herself at dinner and supper, and sometimes going without the former meal altogether. Nevertheless her appetite was good all the time. Her bowels were constipated, and there was some pain when they were moved. For two months after her supposed conception there was considerable irritability of the bladder.

Present Condition.—She is rather pale and thin; muscles flabby; tongue clean; some nausea and pyrosis in the morning. Her pulse is about 86 per minute, slightly irregular, and intermittent. She complains of uneasiness in the præcordial region, of irregularity in the heart's action, and of a constant disposition to sigh.

Her *breasts* are small, and the areola and follicles as in a virgin.

Her *abdomen* is not enlarged; no brown line or umbilical areola exists; everywhere resonant on percussion. There is a pulsatile movement in the centre of the abdomen, visible to the eye and perceptible to the touch, extending from the ensiform cartilage to the promontory of the sacrum. The abdominal walls are very lax, and the spine can be easily grasped through them from just below the ensiform cartilage to the promontory of the sacrum. The aorta and common iliac arteries can be very distinctly felt beating under the fingers. The movement which the woman believes to be due to a fœtus is entirely pulsatile, and is not bearing or expansive. It is unattended with thrill. No aneurismal or other abdominal tumor can be felt. The cavity does not contain a gravid uterus. *Auscultation* of the abdomen reveals a soft blowing murmur throughout the whole course of the aorta, but nothing like an aneurismal whirr. The sound of a fœtal heart cannot be heard. *Auscultation* of the heart and lungs reveals no abnormal sounds. There is no aortic regurgitation.

Vaginal Examination.—Hymen present, partially ruptured. Introduction of finger or speculum gives considerable pain. Uterus high up, rather small, and slightly anteverted; os as in a virgin.

Speculum shows a healthy virgin uterus.

No amount of assurance will make her believe that she is not pregnant.

Treatment.—Infusion of digitalis (gr. xv to ʒiv), ʒj, three to five times daily. Iron (the pyrophosphate), gr. ij, in solution with dilute phosphoric acid, ♏x after each meal. Quinia, gr. ij, before meals, with three or four ounces of wine daily, and the best diet she can procure.

March 8, 1871.—She has abandoned the idea that she is pregnant. She looks rather more fleshy, but is very pale and anæmic. The palpitation of the aorta has ceased, and she complains much of pain in the abdomen above the epigastrium, especially when her stomach is empty. Pain is sharp and lancinating, and comes on suddenly, causing her to bend forward; after it has lasted for fifteen or twenty minutes she grows faint, but does not vomit.

Her appetite is fair, but after eating she digests poorly. She has some pain, but suffers more from tympany, and frequently eructates quantities of gas. Bowels opened daily, but the evacuation is small, and, on the whole, they may be considered rather constipated.

Pressure on the epigastrium produces pain from tenderness. Percussion shows that the abdomen is much distended by gas.

She is very short of breath. Suffers from dyspnœa on going up and down stairs or making other unusual exertion. Cannot walk more than two or three squares.

Complains much of palpitation of the heart. Pulse 100 per minute, soft, very compressible. A soft blowing murmur is heard at the base of the organ, coincident with the first sound.

Does not now complain of the palpitation of the aorta; says it has not troubled her since the last of January. Has no headache. Sleeps well, but is extremely nervous.

Menses are almost suppressed. At the usual time has pain and some headache, as usual, and loses a little blood, but the quantity is very small. Sometimes the flow does not last more than one hour, and the discharge, she states, is nearly black.

Diagnosis.—Gastralgia and chlorosis.

Treatment.—℞.—Bismuth. Subnit., ʒij.
Ft. chart. xii.
S.—One powder before each meal.
℞.—Pulv. Aloes, gr. xv;
Pil. Ferri Carb., ʒss;
Ext. Gentian., gr. iv.
M. et ft. pil. xv.
S.—One after each meal.

An animal diet and porter were ordered at meals.

Under this treatment she gradually recovered.

ON THE MOVEMENTS OF THE EYES.—M. Javol (*The Academy*, April 15, 1871, from *Centralblatt*, No. 5, 1871, and Skrebitzky, in the *Nederland. Archiv. f. genees*—in *Naturkunde*, Band v. p. 474), who is subject to astigmatism, has found that, if the astigmatism be accurately corrected by means of cylindrical glasses when the head is erect, the correction is not perfect when the head is inclined, and that the eyes must consequently have altered their position in the head. A repetition of Donders' experiments of obtaining strong "after-impressions" by an approved method also showed that some rotation occurs. The experiments showed that at an inclination of 10° of the head the rotation of the eyes amounted to 1°, and that it increased proportionally to the inclination, so that when this amounted to 70° to 80°, the rotation increased to 8.6°,—much less, therefore, than was admitted by Hueck. Donders was unable to demonstrate any such rotation by the application of his mode of "after-impressions."

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EDITORIAL.

SENTIMENT VERSUS SCIENCE.

SOME years ago a number of gentlemen formed in this city an association to prevent cruelty to animals; and this body has since done a large amount of good and honest work.

Much later, a number of women conceived the idea that a female branch was desirable, although why they could not have joined the men it is hard to see, except that they wanted a little more chance for sentimentality. However, the ladies got their Society, and began to look about for cruelties. The dogs of the city were at that time caught by rude colored persons, and murdered very savagely at the Pound, by being hanged and stunned with a blow on the head. The spectacle was brutal, and the previous treatment of the dogs unpardonably cruel.

After consultation with physicians, and obtaining the sanction of Councils to conduct these executions, the W. B. got control of the matter, and henceforward destroyed the dogs by the merciful use of carbonic-acid gas. The change was a good and a kind one. But now comes the difficulty. Certain physicians, desiring to experiment upon dogs, applied to the Mayor, and were told that the permission to have condemned dogs—never before denied—must be sought from the Women's Branch of the P. S. P. C. A. A civil letter, asking this favor of the President of the W. B., was answered by a curt note, mockingly proposing to furnish "dead dogs" for dissection, and charging cruelty and torture upon the physician who applied.

A good-humored inquiry as to whether the lady had acted without consultation with her society—which was actually the case—elicited finally three ferocious resolutions from the body in question, amply sustaining its hasty presiding officer.

Resolution 1st cordially approved her action, which was all that was needed. It was necessary, however, to sentimentalize a little; whence Resolution 2d,—which is worth reading:—"That we enter our most strenuous protest against vivisection *as heretofore conducted*,* believing, on the authority of many eminent physicians, that any benefit resulting therefrom *to the cause of science* has not justified the infliction of the horrible sufferings to which thousands of helpless animals have been subjected."

* The italics are ours.

The first phrase is not very clear, but it is pleasant to learn or to be able to infer that their objection is to vivisection "*as heretofore practised.*" Will these ladies kindly suggest the desirable method for the future? The sentences which follow in defence of the protest assume that atrocious torments have been practised before a blood-stained Idol, known to men as Science, without one honest hint at the real and ultimate object to which all experimental medical science looks. We shall at present urge in return only this, that the whole structure of modern medicine and surgery rests upon a knowledge of the circulation of the blood, and that this, like nearly every step in physiology since taken, was won by experiments on animals. We conceive that we have thus gained certain good ends for man,—nay, more, for the animal; but the ladies insist that it is "benefit *to the cause of science*" that we groping doctors seek. Do they really think before penning such words of folly, or are they possessed with an idea that the medical investigator is a person sedulously busy with certain clever but meaningless enigmas or conundrums, with which frolicsome Nature is pleased to puzzle him?

Is it any wonder that honest, thoughtful, and humane men who for the near or remote good of men are eagerly seeking the secrets of life, and who "inflict no pang unthoughtful," should resent with contempt such language and such thought as this?

But our ladies have decided the point, entered strenuous protest, and, one would think, had *said enough*. Not so, indeed; we know that every lady's letter must have a postscript, and Resolution 3d occupies this dangerous place.

To our amazement and amusement, we find in it, "*That, whether vivisection be justifiable or not under any circumstances*, it would be the height of inconsistency that such an organization as ours should lend it its assistance in any way, shape, or form." We are glad, then, to learn that, despite Resolution 2d, there remains a doubt in the minds of the ladies as to the justifiability of vivisection,—the very dramatic word in which they seem most to delight, but which is as little descriptive of physiological experimentation as it well can be. However, the practical end is reached, and, after denial of dogs in "any way, shape, or form," there is no more to be hoped.

Dr. Mitchell replies, defending himself against the charge of cruelty, and referring them to Dalton's pamphlet. We have for this part of the correspondence only a word or two. Do these ladies suppose there is no such thing as moral cruelty, and that pain may not be inflicted by groundless charges of cruelty? And is there not a certain precept concerning the bearing of false witness, which it were well to remember?

We pass on to the last letter, which comes from the Executive Committee,—not that in charge of the Pound, we presume. We propose to sift certain parts of this letter. After a quasi-apology for the President's want of courtesy in her charge of cruelty, and a distinct statement that all experimentation on animals is to be regarded as an abuse, they proceed to state that for a

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society intrusted with funds to protect animals against cruelty and barbarous deaths it would be inconsistent, and a misuse of their means and a betrayal of trust, should they willingly turn over to any physician the dogs already condemned to die. Now, this seems fair enough at first sight. Let us look at it closely. The W. B. obtained leave from Councils to kill the dogs, and with it an annual grant of money, to which the W. B. adds certain subscriptions. Their subscribers, they say, would object to the experimental use of dogs. Very good; but when the city slew the dogs, its Mayor had for years granted this privilege; and why, then, should the W. B. dare indirectly to reflect on these officials, one of whom presided over their recent fair? Why assume to deny a right of value to the public, and which the city had never seen fit to question? There were, therefore, obligations to the public as well as to the subscribing ladies who aid to sustain the "Shelter," and who thus calmly set themselves in the way of the progress of humanity.

Let us put this in another shape. Owing to the relentless pursuit of loose curs and their wholesale executions, it became at one time really difficult to procure subjects for study. Then came their denial by the W. B. Now, it is quite possible for a cause to be a good one, and yet to be so conducted as in the end to inflict endless injury upon the public at large. It is right that the dogs should be killed without unnecessary cruelty. It is not right that any society should have the power to interdict the use of the dog for the good of the man. Suppose a society to be formed to bury unclaimed people, and that it so conducted its affairs as to prevent or make dear the use of bodies in dissection; should it be allowed to answer, "Oh, we don't approve of dissection. What do we care if you cannot get bodies?" Somehow or other the public, when convinced—as it will come to be—of the need for scientific material, is then pretty sure to care.

The answers made to Dr. Mitchell's letter are not such as we wish to trouble medical men with. No allusion is made to his assertion that Dalton's clever pamphlet has been left without reply,—which is strictly true,—except to refer him to two tracts, the one by a Dr. Drummond,—certainly the feeblest of such efforts,—and the other by Mr. Bergh. As to the latter production, we counsel the Society in its wisdom to suppress it for evermore; it is a stupid slander on the medical profession.

The amount of sentimentalism which has been allowed to exhibit itself in connection with this whole matter tempts us to say certain unpleasing truths; but we refrain from doing so out of respect to the body of good that lies behind, and which we hope some day to see stripped of the sentimental trimmings which the feminine fancy has cast around it.

Let us end by placing against the authority of the W. B. of the Society for Prevention of Cruelty to Animals the dictum of Prof. Huxley, that he who interferes with the pursuit of knowledge by experimentation on animals is a foe to humanity.

MILK AS A MEDIUM OF CONTAGION.

SOME years ago, in Edinburgh, it was noticed that typhus fever prevailed extensively among the customers of a particular dairyman. The circumstance led naturally to an investigation, when it was discovered that one or more of the members of his family had been ill with the disease. In this instance the man himself was thought to be the medium of contagion. More recent observation tends to show that milk may itself be a means of communicating disease. Thus, Dr. Bell, of St. Andrews, has shown that several cases of scarlet fever occurred among the customers of a dairyman whose cows were milked by a man convalescent of that disease; and in a pamphlet, which has just been received, "On a Localized Outbreak of Typhoid Fever in Islington," we find that Dr. Ballard, the Medical Officer of Health for the parish, after a careful investigation of all the circumstances attendant upon the epidemic, is compelled to adopt the theory that milk was the medium by which the disease was disseminated.

We have not space to follow Dr. Ballard through the elaborate train of reasoning by which he reaches this conclusion, and must therefore content ourselves with giving a few of the leading facts in the case.

The theory was originally suggested by a lady, and warmly taken up by her medical attendant, by whom it was communicated to Dr. Ballard. He seems to have been little disposed to accept it at first, but nevertheless set to work to see whether it was supported by any facts. He found, first, that the epidemic was almost entirely confined within a circle having a radius of not more than a quarter of a mile; secondly, that out of sixty-two families living within this district who are known to have suffered from typhoid fever, fifty-four, or fully eighty-seven per cent., were constantly supplied with milk from a particular dairy, and it was satisfactorily proved that at least three of the remaining eight had occasionally partaken of milk from the same source; and, thirdly, that out of one hundred and forty-two families, comprising all the customers of this dairy, and living not only within the district above specified, but in other parts of the parish, seventy, or very nearly one-half, were invaded by typhoid fever within the ten weeks during which the outbreak lasted. Among those who were attacked by the fever were the dairyman himself, seven other persons, members of his family, or boys employed and living on the premises, and three men engaged in the business, but who did not live in the dairyman's house,—all of whom had at various times partaken of the milk. It was also clearly shown during the investigation that the milk was of poor quality. Thus, one family testified that they discontinued its use "because it had a bad taste and was disagreeable;" and another person asserted that "she had several times complained to the dairyman himself that the milk when kept became stinking,—not (as she said) merely sour,—and also of its poorness;" while a gentleman who had the curiosity to examine the milk with a sp.

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gr. galactometer inferred that one-fourth of the bulk was added water. There was here at least very strong circumstantial evidence that the milk was diluted before being served out to customers, although against this view was the fact that among the earliest victims of the epidemic were the dairyman himself and some members of his family. In the yard adjoining the stables where the cows were kept was an old underground tank, the woodwork of which was found to have become rotten, and at one corner had broken down to the depth of about eight to ten inches, forming a considerable gap on that side of the tank. Rat-burrows were discovered in the earth immediately adjacent to this gap, communicating freely with a drain connected with a water-closet. No one employed by the dairyman could be induced to confess that water from this tank had ever been used to dilute the milk; but there was positive evidence that it had been freely used to wash the milk-cans. Whether the small quantity of foul water left in the cans after washing would suffice to contaminate the whole bulk of milk subsequently introduced is of course questionable, but Dr. Ballard thinks that it is not impossible. "We all know," he says, "how small, almost infinitesimal, an admixture of sewage will poison a well or running stream; nor is the idea of reproduction of the typhoid contagion out of, within, or in the presence of an appropriate organic material at all foreign to the prevailing opinion upon the subject. Future experience may show that milk, which has remarkable relations to chemical ferments, is a substance peculiarly adapted also to the reproduction of morbid contagia, or to the contagium of typhoid in particular."

Any one who will read this pamphlet carefully will, we think, reach the same conclusion as ourselves, that Dr. Ballard has fully maintained the correctness of the theory advanced by him, and that milk may occasionally and under certain circumstances be the medium for the communication of contagious disease.

The origin of the local epidemic of typhoid fever in Islington might readily have escaped detection by a less intelligent or a less conscientious observer than Dr. Ballard, and we must congratulate the parish of Islington upon having so capable a Medical Officer of Health.

WE take this opportunity of reminding our contributors that all articles sent to us as original communications are accepted with the understanding that they are furnished to us exclusively, and that they have not already appeared, in full or in abstract, in some other medical journal. It is evident, of course, that much of the value of a journal to its subscribers depends upon the freshness of the original communications which it contains; and we feel sure, therefore, that we have only to make this rule generally known to secure its observance. We may add that we always acknowledge the receipt of contributions of all kinds as soon as we have read them and decided as to their merits and suitableness for publication in our columns.

TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a stated meeting of the Pathological Society, held June 22, 1871, the President, John Ashhurst, Jr., M.D., in the chair,

DR. H. ALLEN presented a portion of a *rib of an ox*, showing effects from the pressure of an *encysted conoidal rifle-ball*. A well-defined depression was seen at the inferior half of the outer face of the rib at the base of the neck. Its shape corresponded, in general, to that of the ball, being, however, wider below than above, and somewhat broader and nodulated at its upper border. Its lower border was worn down to a sharp edge, and was emarginated. The ball had probably not struck the bone, but had become encysted, partially impinging upon the rib. The constant to-and-fro motion of the bone in respiration had produced the cavity.

DR. JOHN S. PARRY exhibited the *lungs of a child 2 years and 23 months old*. Both were the seat of *miliary tubercle*, as was also the *liver*, which had undergone some fatty change. At the *base* of the upper lobe of the right lung were also some cheesy deposits.

DR. J. H. GROVE presented a *necrosed inferior turbinated bone with an attached coffee-grain*, with the following history:

A woman, aged 24 years, presented herself at the St. Mary's Hospital a few months ago, with an offensive discharge from the left side of her nose, caused by a hard rough mass, which, after being extracted, was found to be the inferior turbinated bone, necrosed, and having attached to it a coffee-grain, of which the flat surface lay against the side of the bone; the grain was covered over by a cretaceous deposit. The coffee-grain being detached, there remained a distinct impression of its flat surface upon the bone. The mass occupied the middle of the inferior meatus, and completely obstructed the nasal fossa.

It was ascertained that she passed a coffee-grain into her nose when she was four years old, since which time she has had an unnatural discharge from the nose. She has, therefore, evidently retained it twenty years. No other bones of the nose were involved, and in two weeks the discharge ceased.

DR. J. EWING MEARS asked what was the exact position of the coffee-bean,—whether attached to the inner or outer surface of the bone. He thought that if attached to the inner, beneath the scroll-like projection, this would account for its long retention in the fossa. The resulting irritation would cause the inflammatory action which produced the death of the bone.

DR. ALLEN announced that a careful examination of the bone revealed that the bean was really attached to the inner surface, being lodged in the cavity behind the scroll-like process.

The PRESIDENT said there had never been presented to the Society an example of a foreign body from the nostril which had been so long retained, though Dr. G. C. Harlan had presented, December 9, 1869, a fragment of a beetle which had been in the ear of a young gentleman for fourteen years.

DR. J. E. MEARS read the report of the committee to which was submitted the *dermoid cyst of the ovary*, presented by Dr. Hutchinson, February 9, 1871.

DR. MEARS also exhibited a *fragment of bone* removed from a *dermoid cyst* occurring in a patient of Dr. Washington L. Atlee. As in the case reported by Dr. Hutchinson, the patient was unmarried and of unquestioned virtue. The fragment bears some resemblance to the superior maxilla, and contains six teeth of the various kinds, in different stages of irruption. The teeth appear to resemble more closely those of the permanent set. Fatty matter and hair were also found in the cyst. Some of the hairs were quite long, measuring nearly two feet in length.

DR. G. C. HARLAN presented a *photograph of a case of congenital deformity of the mouth*, upon which he had operated recently at the Children's Hospital. The patient was a bright and well-nourished boy, three months old. The deformity

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consisted in an enlargement of the right angle of the mouth, extending the commissure about an inch into the cheek. Beyond this there was a faint line, apparently a slight depression from thinning of the skin, which could be traced to the ear. In front of the ear were three small tumors of hypertrophied skin, attached to the cheek by a narrow pedicle. The largest and most anterior—a little larger than a pea and an inch in front of the tragus—contained a distinct cartilaginous ring. It was probably a rudimentary attempt at an additional auricle, as cases are recorded in which the external ear was absent and just such an appendage found in its place. A smaller tumor was also found in front of the left ear, but the child was otherwise perfectly formed. The mother has several other children, who are without deformity of any kind. The edges of the cleft were freshened and brought together with hare-lip pins, and they united nicely. The tumors were removed at the same time,—the larger by small flaps, and the smaller snipped off with a pair of large scissors. The change for the better in the child's appearance is very decided.

This deformity of the mouth is rare. Holmes, in his "Surgical Treatment of Children's Diseases," mentions only two cases, under the name of Macrostoma Congenitum,—one occurring in the practice of Fergusson, and the other in that of Langenbeck.

Dr. George Pepper presented the specimens from a case of *soft cancer of the left ovary, peritoneum, and uterus*, with *cystic tumor of the right ovary*. The patient was tapped a short time before death, and considerable fluid was thus removed from the peritoneal cavity.

Dr. J. Ewing Mears remarked that Dr. T. G. Thomas, of New York City, as the result of some recent studies in malignant disease of the ovary, has included ascites among the characteristic symptoms. Dr. M. also remarked that in the course of considerable study of the fluids obtained by tapping the abdomen he was led to believe that occasionally, at least, it may be possible to distinguish ovarian and abdominal fluid. Both, of course, contain albumen, but in the peritoneal fluid there is apt to be an absence of the granular cells found almost invariably in ovarian fluid. Quite often, also, in a fluid effused into the peritoneum there is formed the *fibrinogenous* substance of Virchow and others, which keeps on increasing, and is apt to reappear as often as removed, so long as the fluid has not undergone decomposition. This does not generally occur in ovarian fluids, though it is common also in cystic tumors of the uterus itself. It seemed to be the product of irritation.

Dr. J. S. Parry said there was no such substance present in this case, and he thought it was doubtful whether the characters referred to by Dr. M. could be relied upon as diagnostic. He had met the coagulum of fibrinogenous substance in a single instance only, in a pleuritic fluid, though he knew that many cases of its occurrence are recorded.

Dr. James Tyson said that although inflammatory effusions are often met in which this substance does not form, yet he thought it was rarely present in non-inflammatory effusions, *i.e.* those which result from pressure merely, whatever their seat.

Dr. Mears repeated that he merely claimed for the characters named a presumptive evidence.

REVIEWS AND BOOK NOTICES.

Wear and Tear, or Hints for the Overworked. By S. Weir Mitchell, M.D. Pp. 59. Philadelphia, J. B. Lippincott & Co., 1871.

Dr. Mitchell's purpose is to show how the health of our people, both bodily and mental, has been deteriorating under the adverse influences exerted by climate and certain prevalent practices and fashions. He holds that the mischief thereby produced has already risen to a fearful amount, and we presume that no one who has considered the subject professionally will think he has exaggerated the evil. We believe that the more closely we observe the men, women, and children of our time in relation to these influences, the more strongly we shall be impressed with the fact that they are mischievous to an incalculable extent. It is exhibited, as Dr. Mitchell represents, in a large increase of the diseases of the nervous system, in the premature breaking down of men engaged in the active pursuits of life, and in the impairment of the female constitution, whereby a large proportion of the sex become unfitted for the proper performance of their duties as wives and mothers, "multitudes of our young girls being merely pretty to look at, or not that, whose destiny is the shawl and the sofa, neuralgia, weak backs, and the varied forms of hysteria."

The agencies concerned in producing these results, as presented by Dr. M., are the excessive mental strain required by all whose employments task the mind rather than the body, unrelieved by suitable relaxation, the forcing process of education, whereby an amount of mental work is obtained from young children which would be hazardous to adults, and a climate which by some peculiar quality renders the strain of both bodily and mental labor remarkably exhausting. Unquestionably our climate exerts a peculiar effect on the nervous system, as indicated by a high degree of excitability; but in regard to the evils in question we should hesitate to give its influence so wide a sweep as Dr. M. does. The evils themselves are of recent occurrence,—quite unknown, indeed, sixty or seventy years ago; whereas the climate has been the same from the time of the Pilgrims, or, if changed, the change has been for the better. If its peculiar quality is connected with its temperature, it must have improved, for certainly it is not so cold as it once was. "In my warm study," says Cotton Mather, "from the billets of wood lying on a great fire, the sap forced out at the ends of them has frozen there, and been turned into ice, while the wood has been consuming." A winter of such weather now would decimate the race.

We are not disposed to lay less stress than Dr. M. does on the particular causes of this vital depreciation, to which he calls attention. We are glad that people are reminded, on unquestionable authority, of the daily mischief perpetrated in our public and private schools, and hope that men striving with all their might for the great objects of life will heed the timely warning. There are other agencies no less effective in producing the same result, to which Dr. M.—pressed by regard to brevity, probably—has barely alluded.

Any one who has carefully watched the steps of our social progress during the last fifty years must have observed that it has been accompanied by a notable depreciation of the female constitution in the working and aspiring classes. The higher compensation of labor has enabled them to adopt a style of living far in advance of that which was once perfectly satisfactory. Wants are supplied, tastes are gratified, aspirations are entertained, that once were scarcely dreamed of. Furniture and clothing, such as few professional men, and not many others, would have ventured to indulge in at first setting out in life, are too common among the working-classes to attract attention. A centre-table covered with illustrated books, and a piano or a melodeon, probably, for the eldest daughter, indicate some degree of mental cultivation and conceptions of enjoyment beyond the dull routine of their appointed lot. One of the blessings of wealth, however, is beyond reach. With all this show of prosperity, the woman must do her own household work. With her one pair of hands she must prepare the food of her family, make the clothes of herself and the children, and keep her house in order, under the discouragements of frequent child-bearing and prolonged lactation, almost entirely unrelieved by seasons of rest and relaxation. Few of our indigenous women can stand such drudgery long before succumbing to some of the numberless forms of "ill health." Of course, in this condition, they cannot bear healthy children, and so the mischief is perpetuated. This incessant toil, it must be considered, though bad enough at best, is performed under circumstances well calculated to intensify the evil. In the days of wood-fires and open fireplaces it was performed in rooms well ventilated and comfortably warmed. Now, the single fire, to which most families are restricted, is made in a stove, cooking the food and warming the room, the family thus living, year in and year out, in an atmosphere heated to eighty degrees or more and loaded with the vapors and odors of the cookery. Is it strange that,

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living in such a medium, colds and headaches should become a part of their daily experience, abridging their native power to meet the wear and tear of their appointed work? Verily, the blessed genius who will furnish the humble homes of our country with some substitute for the omnipresent cooking-stove which will do its appropriate service without spoiling the surrounding air for all purposes of respiration and warmth, will confer a benefit on his race, scarcely second to that derived from vaccination or anæsthetics.

Hardly inferior to this agency in promoting the wear and tear of domestic labor is the fashion of tight lacing. There was a time—some twenty or thirty years ago, perhaps—when this fashion seemed to have disappeared, but it is certainly common enough now. That women of every degree of culture should undertake to change the figure which Nature has given them, by a painful process of distortion, and at the risk of destroying their fitness for the duties of a wife and mother, would be regarded as incredible if related of some foreign people; and yet the actual fact meets us here at every turn. It is said on good authority that in some English boarding-schools the work of reducing the size of the waist by means of some mechanical contrivances is steadily continued until the regulation pattern is obtained, which is stated to be sixteen inches in circumference, though an inch or two less is often thought desirable. We are not aware that any boarding-school in this country is expected to render such a service, but there is evidence enough that it is accomplished, some way or another, to a frightful extent. This practice, we believe, is accountable for many if not most of the maladies peculiar to the sex,—curvature of the spine, prolapse of the womb, headaches, palpitations, and dropsical effusions. The deterioration of the female constitution thus effected is repeated spontaneously in succeeding generations, and so we have a race of women loathing the offices of maternity, shirking them, perhaps, by reprehensible means, and subject all their lives to the shawl and the sofa. But it is idle to contend against fashion, at whose shrine ease, health, comfort, life, are willingly sacrificed.

We hope this little book will be widely circulated, as it well deserves to be, because the warnings which it utters are greatly needed, and are clothed with the authority of a large experience and a careful observation.

A Treatise on the Medical Jurisprudence of Insanity. By I. Ray, M.D. Fifth Edition, with Additions. 8vo, pp. xvi., 658. Boston, Little, Brown & Co., 1871.

Another reading of Dr. Ray's work, "in which the various forms and degrees of mental derangement are treated in reference to their effect on the rights and duties of man," more powerfully impresses us with its immense value to the student of this branch of legal medicine. The first edition, published thirty-three years ago, and then unique in the English language, was upon a plan so well conceived that each succeeding issue has exhibited but those changes demanded by the progress of ideas, together with the responses of the bench and bar to the requirements of science.

We chronicle with great satisfaction the clear and comprehensive suggestions contained in paragraph 26, concerning *criminal tendency*, that lifelong proclivity to crime, so often observed to depend not entirely upon vicious associations or neglect, but, to a vast extent, upon a certain heritage transmitted from parent to child,—an effect, it may be, of intemperance, convulsive disease, or other morbid affections; also in paragraphs 155–160, devoted to the *insane temperament*, "an abnormal condition closely allied to insanity, and but recently recognized and described." Those to whom this temperament belongs "by no allowable stretch of language can be called insane," writes the doctor, "yet they are ever in the shadow of that abnormal element which has obtained a place among the healthy qualities of the brain." A long and even useful life may be spent by them, achieving a reputation for singularity only, but, in many instances, any unusual demand upon their faculties will result in undoubted mental disease. Indeed, the manifestations of an hereditary liability to brain- and nerve-disorder are very various. The influence of direct descent is firmly established, but atavism, in which one or more generations are exempt, may sometimes occur,—although we believe that the intermediate generation is never completely unscathed. And the practised observer in families where insanity exists recognizes this transmitted element in the neuroses, in the peculiar modes of thought and feeling, in the exaltation and depression, in the headaches, in the irrelevant expressions, in the lamentable want of plain common sense,—all, perhaps, associated with many ennobling gifts and graces.

Fully appreciating the terse words of Mr. William Allen Butler ("Lawyer and Client"), that "the Law is the most positive of sciences and the most rigorous of human forces," we can understand why every plea of insanity is in our courts submitted to the time-honored tests of the knowledge of right and wrong, good and evil, the power of design and delusion; yet we fail to see why the rules which guide the skilful diagnostician of physical disease should not be applied to the detection of mental disease. Still, Dr. Ray's book affords abundant evidence that the scientific jurist does entertain any really valuable suggestions made by our profession; and we look forward to a time when, as recently laid down by Judge Doe, of New Hampshire, insanity shall be "a question of fact for the jury, and not a question of law for the court."

We conclude this brief chronicle by calling the attention of the probable expert to Chapter XXIX., upon the Duties of Medical Witnesses,—especially if suffering from the mental perturbations caused by a *subpœna*.

The Correlation of Zymotic Diseases. By A. Wolff, F.R.C.S. Pamphlet, pp. 24. London, J. & A. Churchill, 1871.

There are so many points of resemblance in zymotic diseases that it is not surprising that the idea has occurred to Mr. Wolff, as it has already done to others, that they might in fact depend upon a cause common to them all. It cannot, however, be denied that there are also points of divergence; and the object of the little pamphlet before us is to explain away these differences. In the first place, Mr. Wolff believes that the principle in physics "that a molecule, set in motion by any power, can impart its own motion to another molecule with which it may be in contact," may be applied to the explanation of the phenomena of disease, and that the various forms of zymotic diseases, epidemic and other, can be explained on the simple principle of extension of molecular motion. It is difficult, as the author admits, to reconcile our minds to the idea that diseases apparently so distinct can have a common origin, but he points out that the difference between any two of these diseases is scarcely greater than the same disease sometimes exhibits in different individuals; and this is notably true of scarlet fever. The true explanation of this variety of zymotic diseases originating from a common cause is to be found in the number of channels through which the noxious agent may find access to the body; and he somewhat fancifully supposes that syphilis and dissecting-wound fever may be caused by the same agent gaining access to the body through the medium of the blood, which, when it strikes through the alimentary canal, may give rise to typhoid fever and cholera. The respiratory organs acting as another channel, the poison may perhaps give rise to the phenomena that we express by the terms scarlatina, measles, etc.

Another difficulty in the way of the acceptance of this theory is presented by the fact that when a healthy subject is submitted to the contagion of any zymotic disease, an exactly similar disease is produced. This difficulty does not, however, appall our author, for "the result," he says, "is exactly what might be looked for, in accordance with the purely physical theory of disease. The molecular motion is extended in precisely the same direction as that from which it was derived, and the different individuals, though distinct, must be looked upon as mere extensions of surface and substance: as when a heated substance is brought into contact with another of low temperature, the heat is communicated to the cooler body; if a tuning-fork be brought into contact with a sonorous body, the two vibrate in unison."

This theory, the author thinks, will explain more satisfactorily than any other many of the phenomena observed during the course of epidemics, and especially will it be found to account for their origin, their diffusion, and their decline. "A certain number, then, of individuals," he says, "subjected to the contagion of these molecules in motion, have the action extended to their bodies, and diffuse the diseased action in a

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constantly widening circle; and this very diffusion, while extending the ravages, tends to limit the duration and gradually diminish the intensity, of the disease. As the undulations of ruffled water gradually die away in the distance,—as the waves of sound decrease in intensity as they are diffused through a larger space,—as a heated substance gradually imparts its motion to contiguous matter until a condition of stasis is arrived at,—so this poisonous action loses in intensity as it gains in extension, until the diseased action is too feeble to overcome the resistance of healthy action, and a state of stasis (restoration of health in the individual, cessation of the epidemic in the community) is the result."

Mr. Wolff has not, however, undertaken to explain to us why it is that individuals who have had one attack of a contagious disease rarely have a second. If he is correct in comparing the molecular motion which causes disease to the motion which is accompanied by heat or sound, we can see no reason why the molecules of a body which have once been set in motion in a particular way should lose the property to be again similarly excited.

THE MYSTERY OF LIFE. An Essay in Reply to Dr. Gull's Attack on the Theory of Vitality in his Harveian Oration for 1870. By LIONEL S. BEALE, M.B., F.R.S., etc. 12mo, pp. 71. London, J. & A. Churchill, 1871.

This little book is written in support of the metaphysical basis of life, as it may be called in contradistinction to Mr. Huxley's well-known Physical Basis of Life. It is an attempt to defend the theory of vitality by showing the weakness of the opposing physical doctrines, and the author has at least demonstrated that his opponents stand upon an insecure foundation. He argues with considerable truth that the correlation of vital and physical forces cannot be accepted unless it is shown "that vitality can be converted into heat or some other mode of force, or that some mode of force or energy can be made to assume the form of vitality." There is also great stress laid upon the fact that living matter has never yet been created by man, and the obvious corollary is insisted upon that scientists should not talk about that of which they know nothing. With all respect for Dr. Beale's earnestness, however, we cannot but regard the assumption of a special mode of force, such as vitality, to be quite as unwarrantable as the wildest proposition of the physicist. For, after all, upon what does the vital hypothesis rest but the *peculiarity* of certain phenomena occurring among special material forms, which cannot be explained by physics or chemistry in the present state of our knowledge? The great difficulty in Dr. Beale's estimation which prevents him from accepting the physical hypothesis is the undoubted fact that living bodies have not been formed by human agency; but this fact affords no foundation for the doctrine of a "special force." Experience teaches that the immaterial entity "aquosity" was only destroyed by the progress of chemical synthesis when water was both decomposed and recomposed in the laboratory. We look to synthetical chemistry in like manner for an explanation of the actions occurring in those complex bodies called living, and, until some certainty is gained, would ask both physicists and vitalists to remember the words of Sir Isaac Newton:

"Whatever is not deduced from phenomena is to be termed hypothesis; and hypotheses, whether metaphysical or physical, or occult causes, or mechanical, have no place in experimental philosophy."

BOOKS AND PAMPHLETS RECEIVED.

On Amputation of Redundant Scrotum in the Treatment of Varicocele. By M. H. Henry, M.D., Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases, etc. Reprinted from *The American Journal of Syphilography and Dermatology*. Pamphlet, pp. 10. New York, F. W. Christern, 1871.

The Sixteenth Annual Announcement of the Pennsylvania College of Dental Surgery.

Annual Catalogue and Announcement of the Woman's Medical College of the New York Infirmary.

A Manual of Midwifery, including the Signs and Symptoms of Pregnancy, Obstetric Operations, Diseases of the Puerperal State, etc. By Alfred Meadows, M.D., London, Physician to the Hospital for Women and to the General Lying-in Hospital. First American from the Second London Edition, Revised and Enlarged, with Illustrations. 8vo, pp. xxiii., 487. Philadelphia, Lindsay & Blakiston, 1871.

Handy-Book of the Treatment of Women's and Children's Diseases, according to the Vienna Medical School; with Prescriptions. By Dr. Emil Dillnberger. Translated from the Second German Edition by Patrick Nicol, M.B. 12mo, pp. xii., 244. Philadelphia, Lindsay & Blakiston, 1871.

The Physician's Prescription-Book: containing Lists of the Terms, Phrases, Contractions, and Abbreviations used in Prescriptions, with Explanatory Notes, etc.; to which is added a Key, containing the Prescriptions in an Unabbreviated Form, with a Literal Translation. For the Use of Medical and Pharmaceutical Students. 18mo, pp. xvi., 286. By Jonathan Pereira, M.D., F.R.S. Fifteenth Edition. Philadelphia, Lindsay & Blakiston, 1871.

GLEANINGS FROM OUR EXCHANGES.

A PECULIAR NERVOUS DISEASE.—Dr. F. Fieber, of Vienna, calls attention in the *Centralblatt für die Medicinischen Wissenschaften* for May 6, 1871, to a peculiar disease of the nervous system, which he has lately had the opportunity of observing. It is characterized by an inability on the part of the patient to execute voluntary movement with a moderate amount of quickness, while no difficulty is experienced in the performance of either very slow or very rapid actions.

HYDRAMYLE.—Dr. Richardson (*Med. Times and Gazette*, June 24), in continuing his researches on the physiological action of the light hydrides, has recently succeeded in rendering one of the series applicable for the production of general anæsthesia, and has administered the vapor of it to human subjects for short operation twice recently, and with marked success. He proposes to call the substance hydramyle. We shall shortly have from him a full account of the action and administration of hydramyle.

EARLY PUBERTY.—A. Menzel (*Centralblatt*, from *Wien. Med. Wochensch.*) reports a case in which puberty manifested itself in a girl four years of age. Shortly after her birth her breasts were noticed to be unusually developed, and at the time she first came under observation they corresponded in size to the breasts of a maiden of sixteen to eighteen years of age. The mother noticed a few days before bringing her to Dr. M. a discharge of reddish liquid from the genitals. The mons veneris and the labia majora were covered with moderately-thick hair. The uterus could be felt through the rectum. The child while being examined showed an unusual degree of bashfulness, but in other respects had all the characteristics of a child of her age.

EXTERNAL EXAMINATION A PREVENTIVE OF PUERPERAL FEVER.—Professor T. Halbertsma, of Utrecht, suggests, in the *Medical Times and Gazette*, that wherever there is a danger, as in lying-in hospitals, of infection from the accoucheur, external examination should be the rule, the internal one the exception. By external examination alone, we can, he says, in most cases, ascertain the position of the child, whether it has sunk deep into the pelvis, and, by auscultation, whether there is danger for the child. If the head is sunk deep, and the pulsation of the fœtal heart normal, we have reason to anticipate a favorable issue, and for the time should do nothing but leave Nature to her own course.

ACUTE DROPSY.—Dr. H. Wood, Jr., at the close of an able paper on the above subject (*Amer. Journ. Med. Sci.*, July, 1871), announces the following conclusions: 1. In acute Bright's disease, whether originating from scarlet fever, ar-

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senical poisoning, or cold, the dropsy is not the result of the kidney disease, but, with the latter, is dependent upon a common cause. 2. An irritant poison, organic or otherwise, may give rise to dropsy without other appreciable organic disease. 3. Exposure to cold and wet may produce dropsy without other disease, and there is, therefore, such an affection as acute idiopathic dropsy. 4. Acute dropsy is mostly, if not always, the result of irritation of the cellular tissue.

MR. W. ADAMS (*British Medical Journal*, May, 1871, p. 525) has arrived at the following conclusions respecting the conditions of the coxo-femoral articulation in anchylosis. The conclusions are adduced in support of the author's proposed operation for subcutaneous division of the neck of the thigh-bone:

1. In rheumatic anchylosis no destruction of bone ever exists, and the head and neck of the thigh-bone, therefore, always remain of their natural size.

2. In anchylosis after pyæmic inflammation, more especially in its subacute form, from which the patient frequently recovers, destruction of bone rarely if ever exists, the soft structures only being destroyed.

3. In anchylosis after traumatic inflammation in healthy adults, such as that which occurs after wounds of the joints, and gunshot wounds in the neighborhood of the joints, the joint itself having escaped injury, and in some cases of anchylosis chiefly from long-retained position, as a general rule, no destruction of bone occurs, even after acute suppurative inflammation, the soft tissues only being involved.

4. In anchylosis after strumous disease of the joint, when arrested in the early stage, without the occurrence of suppuration, or, at least, of abscess bursting externally, there is generally only a superficial caries of the head of the bone; and, the destruction being thus limited in extent, the neck of the thigh-bone remains of its natural length, although practically somewhat shortened by being depressed or sunk into the acetabulum.

5. In anchylosis following the more severe forms of strumous disease, in which there have been evidences of caries and necrosis of bone, with abscesses bursting externally and remaining open a considerable time, generally giving exit to small particles of bone, destruction of the head and neck of the thigh-bone, to a greater or less extent, may be diagnosed.

PURULENT INFLAMMATION OF THE JOINTS IN THE COURSE OF ERYSIPELAS.—Dr. E. Ritzmann (*Berliner Klin. Wochenschrift*, No. 18) calls attention to a condition which occurred as a complication in five of one hundred and thirty cases of erysipelas observed by him in soldiers. The joints affected were at some distance from the wounds for which the patients were under treatment. He thinks that in the course of erysipelas purulent inflammation may occur, as a consequence of the erysipelas, in those joints which lie superficially under the inflamed skin. These inflammations of the joints he believes to be analogous to the inflammations of other serous membranes, and are due to an extension of the disease to the synovial membrane.

In the five cases that Dr. R. had the opportunity of observing, the ankle-joint was affected twice, the knee, elbow, and shoulder-joint each once. Death occurred in two of the cases from pyæmia.

THE ADDITION OF CHLORAL TO COD-LIVER OIL.—The *Gaz. Farm. Ital.* (*Med. Times and Gaz.*, June 24) advocates the addition of chloral hydrate to cod-liver oil. It renders it much less nauseous, and prevents the night-sweats of the phthisical patient, induces sleep, and creates appetite. The pure chloral-hydrate crystals may be added to cod-liver oil in the proportion of ten grains of the former to one hundred and ninety of the latter.

LESIONS OF NUTRITION FOLLOWING WOUNDS OF THE PERIPHERY.—P. Schieffendecker (*Centralblatt*, May 6; from *Berliner Klin. Wochensch.*, No. 14) says that atrophy of the muscles, thickening of the skin, with an excessive development of pigment in it, desquamation, increased growth of the hair and nails, excessive sweating, and diminution of the temperature, are among the commonest results of wounds of the extremities. The development of the skin and of the epidermal structures which takes place under these circumstances is attributed to the relative increase in the quantity of nutritive material supplied to them, in consequence of less being appropriated by the muscles. Dr. S. has observed the same development of the skin and its appendages, together with the inter-muscular fat, in cases of central nervous disease.

Dr. H. Fischer (*Centralblatt*, May 6; from *Berliner Klin. Wochensch.*, No. 13), in a more elaborate article, calls attention to some nutritive changes after wounds of nerves which have already been pointed out by Dr. S. Weir Mitchell.

THERAPEUTIC ACTIONS AND USES OF TURPENTINE.—In the course of a paper on this subject (*Edinburgh Medical Journal*, July, 1871), Dr. Warburton Begbie takes occasion to recommend the use of turpentine in the severe headache which is apt to occur in nervous and hysterial women. "There is, moreover," he says, "another class of sufferers from headache, and this is composed of both sexes, who may be relieved by turpentine. I refer to the frontal headache, which is most apt to occur after prolonged mental effort, but may likewise be induced by unduly-sustained physical exertion,—what may be styled the headache of a fatigued brain. A cup of very strong tea often relieves this form of headache; but this remedy, with not a few, is perilous, for, bringing relief to pain, it may produce general restlessness and—worst of all—banish sleep. Turpentine, in doses of twenty or thirty minims, given at intervals of an hour or two, will not only remove the headache, but produce, in a wonderful manner, that soothing influence to which reference has already been made."

ON THE REPRODUCTION OF THE EPITHELIUM OF THE CORNEA.—In some experiments in this direction, by Dr. Hjalmar Heiberg, of Christiania (*The Academy*, April 15; from *Stricker's Medizinische Jahrbücher*, 1871, Heft 1), the epithelium was scraped off clean with a scalpel from a small space on the surface of the cornea, and a series of corneæ so prepared was studied after intervals of five, six, eighteen, etc. hours. Immediately after the operation the free space is bounded by sharp vertical edges, which in five or six hours become flattened, so that the boundary-line is no longer well defined; in eighteen hours the space is reduced one-half, and in from forty hours to three days it is entirely covered over. Microscopically it was found that the epithelium was reproduced only around the edges, so that an insulated spot of epithelium never appeared. In the reproduction of common skin over abraded surfaces, Dr. H. believes that the parent epithelium of the spot is derived from some destroyed gland-duct, and, as there are no glands in the cornea, the phenomenon cannot occur here. Some of the corneæ were watched for from two to five hours. Wander-cells were observed on the free surface of the corneæ, in its substance, and also among the epithelial cells, but Dr. H. was unable to observe the transmutation of these cells into epithelial cells. Between the mass of old cells and the two or three rows of new ones was seen a zone of yellowish masses, apparently of intercellular albuminous substance, which appeared to have always a centre of aggregation. They executed amœboid movements, and one of them was observed to separate into five rounded masses. Dr. Heiberg's conclusions were, however, drawn from the investigation of sections of the cornea treated with perchloride of gold. Apparently, two layers of cells advance over the denuded space, the cells of the outer layer sometimes advancing over those of the under, and sometimes *vice versa*.

Cells with many nuclei rarely occur, but one was observed containing five. Dr. Heiberg believes that the cells around the edge of the bare space send out processes in which there appears a translucent spot, which spot becomes the nucleus of the cell thus formed. He thus thinks that the nuclei of the new cells are not derived from the division of those of the parent cells. These become the parents of others in the same manner, and thus the space is partially filled up. These results are opposed to those of J. Arnold, who says the new cells are developed out of a finely granular mass, which first coats over the abraded surface.

PHYSIOLOGY AND PATHOLOGY OF THE CIRCULATION.—Dr. George Johnson (*British Medical Journal*, May 20, 1871) denies the existence of a peristaltic wave throughout the circulation, due to muscular contraction, analogous to that which takes place in the small intestine, as claimed by Legros and

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Onimus in Robin's *Journal de l'Anatomie et de la Physiologie*, 1868. Dr. J. says the error of these gentlemen lies in their not being careful to distinguish between the functions of the large elastic arteries and those of the microscopic muscular arterioles. The pulsating wave in the former is obvious, and is explained by the action and reaction of the ventricular contraction and arterial resiliency by which the intermitting rush of blood from the heart is gradually converted into a continuous stream in the small arteries and capillaries. This is the pulsation which Messrs. Legros and Onimus have seen without a lens in the branches of the retinal artery and in the ear of the rabbit. The arteries which are large enough to be visible by the unaided eye are mainly elastic, and contain very little muscular tissue. Watched with a high power, the circulation in the web of a frog's foot is seen to be equable and continuous both in the capillaries and the muscular arterioles, though sometimes the impulse of the heart will be seen to distend slightly the microscopic arterioles.

It is well established that, in order that a muscular canal may drive on its contents in a definite direction, it must either be provided with valves, or it must contract in a peristaltic wave like the intestine. We know that the former is not the case, and see in the transparent parts of animals that the minute arteries do not contract peristaltically. It is obvious, therefore, that, while they regulate the blood-supply, they have no power forcibly to drive the blood onwards. This is the generally-received view, and, Dr. J. says, can only be temporarily disturbed by the inexact observations and loose reasoning of Messrs. Legros and Onimus.

Another correction is made by Dr. Johnson, which we think it desirable to disseminate, since we are confident that the error is accepted as truth by many in this country. In proof that the arteries alone suffice by their contraction to carry on the circulation, a writer in the *British and Foreign Medico-Chirurgical Review* for April refers to the case of an acardiac fœtus, published by Sir Benjamin Brodie, of which the reviewer says it "lived several days after birth." Startled by this seemingly incredible statement, Dr. Johnson referred to the paper in the *Philosophical Transactions*, 1809, p. 161, where he found it stated that "both fœtuses were born dead." He says, moreover, it is well established that an acardiac fœtus has never been known to occur except in association with a twin fœtus perfectly developed; and Sir Astley Cooper, describing a case of this kind in *Guy's Hospital Reports*, vol. i., first clearly demonstrated that, by means of the communication between the arteries and veins of the two fœtuses at the junction of the umbilical cord with the placenta, the heart of the perfect fœtus drives the blood through the vessels of its acardiac companion.

MISCELLANY.

CONDURANGO. — Dr. D. W. Bliss, of Washington, D.C., reports in the July number of the *New York Medical Journal* two cases of mammary and one of uterine cancer treated by him with condurango. We believe that he is the first physician in good standing who has given to the profession the results of his experience with this remedy in the treatment of this disease, our sources of information in regard to it having been, up to the appearance of his paper, highly sensational articles and advertisements in the secular press. Dr. Bliss found the drug to act most happily in the three cases which he reports, but unfortunately the supply gave out before it could be said to have been thoroughly tested in any one of them. We cannot help regretting that Dr. Bliss's account of the condition of his patients, both before and after its administration, as well as of the progress of their cases, is so very meagre. In the report of one of the cases—that of Mrs. Matthews, the mother of the Hon. Schuyler Colfax—he delegates this duty almost entirely to Mr. Matthews, from whose letters he makes lengthy extracts. This was rendered necessary to a certain extent, it is true, by the return of Mrs. Matthews to her home in Indiana; but the details which he himself furnishes of the other cases are equally meagre.

In all the cases decided improvement resulted from the use of condurango, and Dr. Bliss evidently believes that it possesses the power to cure cancer. We should certainly be glad if upon a fuller trial this were found to be the case; but, having known before now a remedy to enjoy a temporary reputation in the treatment of malignant disease, and subsequently to lose it, we require further proof of its usefulness before accepting it as a specific. Dr. Bliss, it seems, intends to subject the drug to a fair trial, for we learn from another source that he has sent his partner, Dr. Keene, to Ecuador, to procure a large supply of it. Although Dr. Keene has met with many difficulties in penetrating to the region where the plant grows, he has at last been successful in obtaining a large quantity of it, and will return to this country in August.

An analysis of the drug has been made by Prof. Antisell, of Washington. Very little is known of the plant from which it is derived, but it is believed to be a shrub. The bark contains whatever medicinal virtues are in the plant.

The constitution of one hundred parts of bark is as follows:

Moisture	8
Mineral salts	12
Vegetable matters	80

These vegetable matters are separable by the usual methods into the following:

Fatty matter, soluble in ether and partially in strong alcohol	.7
Yellow resin, soluble in alcohol	2.7
Starch, gum, and glucose	.5
Tannin, yellow and brown coloring-matter, and extractive	13.6
Cellulose, lignin, etc.	63.5
	80.0

Whatever medicinal virtues the plant may possess must—Dr. Bliss says—reside either in the yellow resin or in the extractive, neither of which seems to be present in it in large amount. No crystalline alkaloid or active principle, no volatile oil or acid, was separable by the usual method of proximate analysis.

INFANTICIDE IN LONDON.—Dr. Lankester remarked recently, at an inquest on the body of a newly-born child which was found under the gate of a lady's residence at Paddington, that over three hundred bodies of children are found in the streets of London every year.

THE NEW ST. THOMAS' HOSPITAL.—On Wednesday, June 21, the Queen, accompanied by several members of the royal family, and attended by a brilliant suite, composed of cabinet officers, church dignitaries, and distinguished members of the medical profession, formally opened the new hospital. The Queen gave her own name to one of the wards, and that of the late Prince Consort to another, and conferred the honor of knighthood upon the Treasurer of the Hospital. The busts of Cheselden and Mead, the gift of the old students of the hospital, excited much interest among professional visitors.

TESTIMONIALS TO DISTINGUISHED PHYSICIANS.—We are glad to learn from the London medical journals that the opportunity offered by Mr. Paget's retirement from the active

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duties of Surgeon to St. Bartholomew's Hospital is not to be allowed to pass without steps being taken to mark the appreciation of the manner in which his genius and energy have been exerted to promote the prosperity of the hospital and medical school during his long and intimate association with them.

It is also the intention of the past and present students of Guy's Hospital to present a testimonial to Mr. Edward Cock, in recognition of his faithful services at that institution; and Dr. Sibson and Mr. Lane are to be the recipients of a similar compliment from their old pupils at St. Mary's Hospital.

DEATH OF THE DOUBLE BABY.—Mina and Minnie Finley, the double baby, as they have been popularly called, whose case was very fully reported in Dr. William Goodell's able and interesting lecture "On Monstrosities" which appeared in the number of the *Medical Times* for June 15, died on the 18th of July in Boston, Mass. From the newspaper account we infer that Mina, the more robust of the children, became sick soon after being taken to Boston, and died after a few days' illness. The other child seems to have been in perfect health at the time, but, in spite of the efforts of physicians to save its life, died three hours after its sister. It is not known whether the parents of the children permitted a post-mortem examination to be made.

EXPOSURE OF SMALLPOX PATIENTS.—A woman was fined five pounds in London for having wilfully exposed her maid-servant while suffering from smallpox. The unfortunate woman was ordered to leave the house, and was in the street several hours. On the other hand, Dr. Aldis, the Medical Officer of Health of St. George's, Hanover Square, applied for a summons against a milkwoman in Belgravia for exposing herself during the time that she had smallpox. The magistrate told him that the act of Parliament applied only to cases of outdoor exposure, and reluctantly declined to grant the application. The London *Lancet*, in commenting upon the circumstance, says, "If this be the right construction of the act (which we have no reason to doubt), it is a very obvious defect in the law, and affords another proof of the correctness of the vulgar proverb that you may always drive a coach-and-six through an act of Parliament."

THE STRASBURG MEDICAL SCHOOL.—The *British Medical Journal* of June 10 and the London *Lancet* of the same date contain contradictory statements in regard to the School of Medicine at Strasburg. The former says, "The Medical School of Strasburg will probably be transferred to Lyons. A deputation of the Strasburg professors and the Director of the Secondary School of Medicine at Lyons have gone to Versailles to hold a conference on the subject with the Minister of Public Instruction." The latter, on the other hand, asserts that "the lectures of the Medical School, after some hesitation, have been resumed, as Dr. Schützenberger, the dean, strove to remove difficulties. The Prussian authorities have signified that at the present time the teaching may be carried on in French, as heretofore." There appears to be, however, but little doubt that the former professors of this school will hereafter lecture at Lyons.

TWO INSTITUTIONS CONFUSED.—We noticed in a late number of *Every Saturday* a statement—and we have seen it elsewhere—that women are now admitted to the medical lectures at the University of Pennsylvania. This is of course a mistake, the writer of the paragraph evidently confusing the University with the Pennsylvania Hospital, an institution with which it is wholly unconnected, and in which female students at present receive separate instruction in clinical medicine and surgery. The effect of their introduction to the hospital has been to diminish the number of the male students in attendance upon the regular clinics; and, with this experience before them, it is most improbable that the Trustees of the University would adopt so suicidal a policy as that of throwing open the lecture-rooms to women. The medical profession is ably represented in the Board of Trustees of the University; and this alone would prevent any such hasty or unwise legislation as that by which female students were admitted to the clinics of the Pennsylvania Hospital.

A DRUGGIST SUED.—From the *Medical Times and Gazette* we learn that a suit was recently brought in England against a chemist and druggist by a man to whom the former had given some mercurial pills, with directions how to use them. The pills salivated him, and an illness followed, which the medical man in attendance ascribed to the effects of the pills. The judge held that the law now was that every person who professed to follow any skilful employment was bound to bring to the exercise of it a reasonable amount of skill. This applied to medical men, but not to chemists and druggists, who were simply sellers of drugs. If a man would be so great a fool as to go to a chemist and take any pills that he might give him, it was his own fault. The matter having been argued at some length, his Honor decided that there was no case for the jury, so that, unless the plaintiff elected to be nonsuited, he should direct the jury to find a verdict for the defendant. The plaintiff preferred a verdict for the defendant, in order that he might be in a position to appeal.

It would be very well for this community if it understood that few apothecaries in this country have any knowledge of the therapeutic properties of drugs.

LOCAL LONGEVITY.—The Miscellany of this journal contains, in addition to much other matter, reports of the mortality of Philadelphia, condensed from the weekly returns of the Board of Health. We do not give, however, the ages of those whose deaths are recorded. To supply this omission, to a certain extent, we insert the following paragraph, which is taken from the *Public Ledger* of this city, and which we think will be of interest to our readers:

"The record of the last six months, beginning January 1 and closing June 30, shows that in the obituary columns of the *Public Ledger* there appeared, during that period, notices of the deaths of no less than 280 persons who had lived to or beyond the advanced age of eighty years. Of these 114 were males and 166 females, showing that the females outnumbered the males by 52,—about three to two. A further analysis also demonstrates that while the females living over eighty years outnumbered the males, the females also were the longest lived, there being many more females than males who lived to or beyond the age of ninety years."

COMPARATIVE MERITS OF THE MEDICAL SCHOOLS OF VIENNA AND BERLIN.—Dr. H. Rosborough Swanzy, in a letter to the *British Medical Journal* for June 17, says, "I think Berlin and Vienna to be equally good for the study of clinical surgery, ophthalmic surgery (since the death of Von Graefe), physiology, and histology. I think that Berlin has the advantage in operative surgery, clinical medicine (since the death of Oppolzer), physiological chemistry, pathology, and psychiatrical medicine; while Vienna excels in diseases of the skin, syphilis, laryngoscopy, and obstetric medicine."

STATISTICS OF THE GENERAL HOSPITAL IN VIENNA.—In order that our readers may be enabled to judge for themselves

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of the opportunities for the study of disease afforded by Vienna, we copy the following statistics from the number of the same journal for July 1, 1871:

"The report for 1869 of the General Hospital in Vienna, containing 2000 beds, shows that the number of patients admitted during the year was 20,214,—12,789 males and 7425 females. The average mortality was 12.6 per cent. The maximum number of male patients in hospital at one time was 1070, in December, and of females, 812, in January. The average duration of each patient's stay in hospital was thirty-one days. The total number of cases was 1097 more than in 1868; the death-rate was nearly the same, having for fourteen years oscillated between 11.4 and 13.3, except in 1866, when cholera was prevalent and the deaths amounted to 14.4 per cent. Among the cases were 792 of ileo-typhus or enteric fever, 27 of exanthematic typhus, 332 of intermittent fever, 1458 of pulmonary phthisis, 3 fatal cases of hydrophobia, and 2 of dissection-wound, which recovered. There were also four cases of cerebro-spinal meningitis,—all in males; 729 of pneumonia,—the disease affecting both lungs in 121 cases; 495 of gonorrhœa, 410 of syphilitic chancre, and 1286 of secondary syphilis. Among the operations were 95 amputations, 36 resections, 187 cases of removal of tumors, 10 cases of lithotomy, and 9 of lithotrity; 7 ovariotomy cases (of which 6 were fatal), 305 operations for cataract, and 249 iridectomies. The total expenses for the year amounted to 589,611 florins (about $270,000).

Responsibilities of Physicians.—It is well known that it is by no means so easy a matter to become a practitioner of medicine on the Continent of Europe as in this country, and that any one who would attempt to exercise the functions either of a physician or of a surgeon, without having first qualified himself for it by an attendance at a medical school and by passing a thorough examination, would be rigorously dealt with by the law. The effect of this is to secure to the community the advantage of having well-educated physicians, to diminish the number of irregular practitioners, and to prevent encroachments upon the rights of regularly educated physicians. In Austria, however, the state demands, in return for this advantage, that the physician shall keep himself thoroughly informed as to the progress made by the medical sciences, and punishes with great severity any one who shows himself incompetent or ignorant of the changes which have occurred in the practice of his profession. We believe, also, that a physician is responsible to the law if he fail to perform any operation, such as the Cæsarean section or herniotomy, and the patient die in consequence of his neglect.

To show the severity of the Austrian law in these particulars, we quote the following from the *British Medical Journal* for July 1, 1871:

"The Vienna newspapers report a remarkable and startling trial for malpraxis, which presents considerable interest. A surgeon, sixty-three years of age, in a case of difficult labor, proceeded, after waiting a couple of hours, to deliver by means of a bent lever. After great exertion, which bathed the doctor in sweat, the child was brought to light with injuries inflicted on the head, which, according to the official jurist, had caused death. The court submitted that the use of the instrument was unjustifiable according to the opinions now taught; to which the doctor vainly retorted, that the instrument had been recommended to him, in the year 1832, by the then professor, and that he had since used it frequently with success. The court decided that he should be deprived of his license to practise midwifery till such time as he should prove, by a new examination, that he had made up his way in professional knowledge. The judge offered some very admirable advice to the unfortunate practitioner, observing that when a man devotes himself to a branch of science or art he dare not remain stationary, but he must advance with the spirit of the time and keep pace with the progress of science."

Mortality of Philadelphia.—The following reports are condensed from the records at the Health Office:

	For the week ending July 8.	July 15.
Consumption	39	41
Other Diseases of Respiratory Organs	13	22
Diseases of Organs of Circulation	16	21
Diseases of Brain and Nervous System	55	74
Diseases of Abdominal Organs	125	163
Zymotic Diseases	21	16
Debility	18	26
Marasmus	19	17
Cancer	3	7
Syphilis	2	0
Scrofula	0	0
Tetanus	1	1
Old Age	7	13
Stillborn	24	22
Malformation	0	0
Casualties	14	14
Sunstroke	0	1
Suicide	0	1
Murder	0	1
Intemperance	1	1
Unclassifiable	16	17
Unknown	5	2
Totals	379	460
Adults	141	161
Minors	238	299

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 4, 1871, TO JULY 18, 1871, INCLUSIVE.

Wirtz, H. R., Surgeon.—By S. O. 38, Headquarters Department of Arizona, so much of S. O. 22 from those Headquarters as directs this officer to proceed to Camp Lowell, A.T., for duty, is revoked.

Ghiselin, J. T., Surgeon.—By S. O. 258, War Department, A. G. O., July 1, 1871, leave of absence extended six months.

McClellan, Ely, Assistant-Surgeon.—By S. O. 261, War Department, A. G. O., July 5, 1871, relieved from duty in the Department of the Missouri, to proceed to Philadelphia, Pa., and report by letter to the Surgeon-General.

Janeway, J. H., Assistant-Surgeon.—By S. O. 120, Headquarters Department of the Missouri, July 3, 1871, assigned to duty at Fort Hays, Kansas.

Happersett, J. C. G., Assistant-Surgeon.—By S.O. 126, Headquarters Department of the Missouri, July 13, 1871, assigned to duty at Fort Garland, C.T.

Woodhull, A. A., Assistant-Surgeon.—By S. O. 272, War Department, A. G. O., July 13, 1871, leave of absence extended 11 days.

Gibson, Joseph R., Assistant-Surgeon.—By S. O. 272, War Department, A. G. O., July 13, 1871, granted leave of absence for 30 days.

Buchanan, W. F., Assistant-Surgeon.—By S. O. 143, Headquarters Department of the East, July 6, 1871, assigned to duty at Fort Hamilton, N.Y. Harbor. Assignment suspended until further orders by S. O. 149, Department of the East, July 13, 1871.

Azpell, T. F., Assistant-Surgeon.—By S. O. 105, Headquarters Department of California, June 17, 1871, to report in person to the Medical Director of the Department.

Fitzgerald, J. A., Assistant-Surgeon.—By S. O. 121, Headquarters Department of the Missouri, July 5, 1871, granted leave of absence for 30 days.

Styer, Charles, Assistant-Surgeon.—By S. O. 72, District of New Mexico, June 23, 1871, to proceed to Fort Stanton, N.M., for duty at that post.

Delaney, Alfred, Assistant-Surgeon.—By S. O. 120, Headquarters Department of the Missouri, July 3, 1871, to proceed to Santa Fé, N.M., and report to the Commanding Officer District of New Mexico for assignment to duty.

Hall, John D., Assistant-Surgeon.—By S. O. 152, Headquarters Department of Dakota, July 8, 1871, assigned to temporary duty at Cheyenne Agency, D.T.

Byrne, C. B., Assistant-Surgeon.—By S. O. 93, Headquarters Department of the Columbia, June 29, 1871, upon being relieved at Camp Harney, to proceed to Camp Warner, Oregon, for duty at that post.

Reynolds, Frank, Assistant-Surgeon.—By S. O. 93, c.s., Headquarters Department of the Columbia, upon being relieved at Fort Stevens, to proceed to Camp Harney, Oregon, for duty at that post.

Ewen, Clarence, Assistant-Surgeon.—By S. O. 154, Headquarters Department of Dakota, July 11, 1871, relieved from attendance as witness before G. C. M., and directed to return to his post, Camp Baker, M.T.

O'Donoghue, F., Medical Storekeeper.—By S. O. 261, War Department, A. G. O., July 5, 1871, granted leave of absence for 60 days on surgeon's certificate of disability.

Mechem, A. F., Surgeon.—Died at Pleasantville, Harford Co., Md., July 14, 1871.

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TUESDAY, AUGUST 15, 1871.

ORIGINAL LECTURES.

TWO CLINICAL LECTURES

ON PELVIC PERITONITIS.

BY JOHN S. PARRY, M.D.,

Attending-Accoucheur to the Philadelphia Hospital.

LECTURE II.

GENTLEMEN: There are several important points in the clinical history of pelvic peritonitis to which I wish to call your attention this morning. The symptoms in the two cases which were presented to you at our last lecture, were sufficiently striking to attract the attention of even a superficial observer. Indeed, both women suffered severe pain, and, aside from the physical examination, there was enough to lead us to believe that they were the subjects of some form of pelvic inflammation. This, however, is by no means always true; and there is now under my care a patient whose history most strikingly illustrates the correctness of this statement. She is a young woman, who was delivered of her second child on the 16th of February last. She had a severe hemorrhage. The accoucheur in attendance twice introduced his hand into the uterus and attempted to scrape off pieces of what he supposed to be retained placenta. She afterwards had a little fever and some pain in the hypogastrium, but the symptoms were so slight that no treatment was instituted for them. She recovered slowly, and when she got out of bed her belly was as large as at the end of pregnancy. This was due to tympanitic distention; and upon examination a hard tumor was discovered occupying both the left iliac fossa and the left portion of the vaginal cul-de-sac; there were also uterine displacement and immobility. Pelvic inflammation is so likely to be latent that Dr. McClintock says* it is as necessary to make daily examinations of the iliac fossæ of a lying-in woman as it is to feel her pulse. You should not forget this, as it may save you mortification and annoyance in your practice. According to Dr. Duncan,† pelvic peritonitis, or perimetritis, as he calls it, is more apt to be latent than pelvic cellulitis, or parametritis; and we have every reason to believe that this assertion is entirely correct. It is not only true of the puerperal variety of the disorder, but, as has before been hinted, the statement applies with still greater force to the non-puerperal form; for any one who has made numerous autopsies in a large hospital, such as this, must have been struck with the number and extent of the adhesions and other signs of pelvic peritonitis to be met with in the bodies of women who have never admitted that they were the subjects of any disease of the pelvic organs.

Speaking of the fever, it is well enough to remember that after the disease has progressed for several days, if it is to terminate favorably, this with the pain and tenderness diminishes rather suddenly.

In the history of the second or puerperal patient it is to be hoped that you noticed the very distinct and, I believe, very important fact that preceding the tenderness and pain in the iliac fossa there were uterine pain and tenderness, and that it was not until the second day of the disease that there were any evidences that the inflammation had spread beyond that organ. In other words, the affection might be called metro-pelvic peritonitis, or, as some will erroneously have it, metro-peritonitis. The more I study these affections the more I become convinced that there is a relation between an inflamed condition of some of the uterine tissues and pelvic inflammation, whether it be cellular or peritoneal. The particular condition of the uterus which predisposes a woman to an attack of one of these diseases appears to be endometritis; and this is true not only in the puerperal but also in the non-puerperal state. More will be said upon this point in speaking of the etiology of the disorder, and at present I would only urge you—and that most earnestly—to be exceedingly cautious about making any irritating application to, or any rough examination of, the interior of the womb, if your patient has any inflammation of the lining membrane of the organ. By thus speaking, I do not desire to make you inactive, but I do most earnestly hope to save you from the bitter experience which I have had, and some of which I shall detail to you presently.

Our puerperal patient, as you notice, has this morning, more than two months after delivery, a large uterus, the upper margin of which is about midway between the symphysis pubis and the umbilicus. This is not necessarily the result of inflammation of that organ; but it seems that all the inflammatory diseases of the pelvis which occur immediately after labor may, and indeed are most likely to, interfere very materially with the normal changes which the uterus undergoes after delivery. Hence subinvolution of that organ nearly always accompanies or succeeds perimetritis or parametritis in lying-in patients. In a few instances I have noticed that there was considerable enlargement of the organ accompanying the uterine pain and tenderness which have preceded or attended puerperal pelvic peritonitis, or cellulitis. In several such cases the womb seemed to contain some foreign body, but an examination for coagula proved it to be empty. I have seen it so large that it seemed as if it held an entire placenta.

The same patient, during her second paroxysm, which occurred in the latter part of February, had two or three copious uterine hemorrhages. This is not a necessary symptom of pelvic peritonitis, but it sometimes, though in my experience rarely, occurs in the puerperal variety. M. Bernutz,‡ in his work upon this disease, says that when hemorrhage is present in a series of cases it *may* portend the occurrence of an epidemic of puerperal fever. Of the correctness of this assertion I can say nothing. It has not been a common symptom of the disease during the past winter; while the affection has been unusually frequent in the wards. In my own beds at this time there are four lying-in women suffering from the disorder.‖

In the discussion of the clinical histories of these patients, the terms hardness, induration, and tumor have been used with some laxity,—and, indeed, as being almost synonymous. This has been done intentionally, because it is exceedingly common to apply them in this loose manner, and because I hoped to thus impress you more strongly with the importance of the subject; for when you meet with cases of pelvic inflammation in future, it is probable that nothing about them will surprise and interest you more than the physical signs. Few things are more striking than the dis-

* Clinical Memoirs on Diseases of Women, p. 3.

† Perimetritis and Parametritis, p. 77.

‡ Clinical Memoirs on Diseases of Women, p. 91, N. Syd. Soc. ed., 1866.

‖ Scarcely a week after this lecture was delivered, puerperal fever became epidemic in the wards, necessitating the temporary removal of the patients.

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covery of such a mass as exists in the pelves of these women; but I warn you not to be misled here. Those apparent tumors do not indicate the existence of a new formation of any considerable size. Let me illustrate this statement by a case. Just after beginning the practice of my profession, I was called one morning to see a young prostitute who was suffering from a mild attack of gonorrhœa. A few days later, pelvic inflammation supervened, and, as I knew but little about these diseases at that time, no vaginal examination was made. A few days afterwards, however, such an examination was made, and, to my surprise, the left vaginal cul-de-sac was filled by what appeared to be a large tumor, which was hard, slightly rough on its surface, and the centre bulged somewhat downward into the cavity of the vagina. It felt when thus examined like a fibroid tumor as large as an orange, projecting from the left side of the fundus of the uterus, and connected with that organ by a short, narrow bend just out of reach. But by bimanual palpation the left side of the pelvis was found to contain no foreign body, and the apparent tumor proved to be—if the expression may be used—a sort of linear induration or hardening of the roof of the vagina. Precisely the same condition was present in the early stages of the disease in our puerperal patient, and it was only later, as you have heard it stated in the history, that the swelling and hardness were felt above the pelvic brim. Any one who has had but little experience in this affection must be much struck with the fact that by vaginal examination alone there is often every indication of the presence of a large pelvic tumor,—one that is slightly rough, and almost as firm as a uterine fibroid tumor, though usually a little more elastic. Pressure on the iliac fossa shows this to be more apparent than real, for by combined manipulation the mass proves to be a mere induration of the vaginal roof. In other words, the breadth of the swelling is out of all proportion to its thickness.

In the puerperal woman, after the third paroxysm, we were able to feel the induration above the superior strait, and by combined external and internal manipulation we could detect, in the vagina, the impulse transmitted from the hand pressing over the brim. Even this, apparently certain as it is, is not sure evidence that there is any very considerable inflammatory thickening, because these tumors are sometimes formed by adhesions between the surrounding viscera, and the degree of hardness which may attend these is very surprising.

The terminations of pelvic inflammations, whether cellulitic or peritonitic, puerperal or non-puerperal, are in resolution, in permanent indurations from false membranes with or without much uterine displacement, or in suppuration.

It is hardly probable that suppuration will occur in either of these patients. It will be more likely to supervene in the puerperal than in the non-puerperal. In the latter the inflammatory products will go on diminishing in size, and the uterus may regain considerable mobility, or it may remain firmly fixed for a long time. It is not uncommon for these inflammations to go on to suppuration, in which case the abscess may empty into the vagina, the rectum, the bladder, the uterus, or the general peritoneal cavity, or through the abdominal walls. I have never seen these abscesses break into the general peritoneal cavity; a termination which is nearly always fatal, and is much to be dreaded. Fortunately, however, it is exceedingly rare. Nature, ever wise and ever watchful of the interests of the human family, has so constituted man that nothing has been left undone to protect and preserve his life; and it seems that there was a special provision to protect the general peritoneum in inflammation of the pelvic portion of that membrane, for not only is it rare for the abscess to burst into its cavity, if the disease have gone on to suppuration, but it is scarcely more common for the inflammation to extend beyond the pelvis and to involve the general peritoneum. It seems that after the disease has reached the ileo-pectineal line its progress is arrested in most cases, and if it does extend beyond this at all, its course is soon checked by adhesive inflammation of the peritoneum covering the viscera.

Nor have I ever seen a pelvic abscess break into the bladder; but I have met with examples of all the other varieties, and of some of them more than one. Rupture into the vagina has been the most frequent, and into the intestinal canal the next. Evacuation of these abscesses through the uterus must be very rare; but I saw it occur once in a puerpera. The purulent discharge was copious, and was followed by repeated and profuse uterine hemorrhages during the succeeding month.

From the cases which have come under my own care, it appears that it is most favorable for the pus to find an outlet through the vagina. If the opening occurs into the rectum, the pus in the gut is exceedingly likely to give rise to violent tenesmus and diarrhœa. In other cases, however, in which the abscess opens into the alimentary canal high up, as into the small intestine, these symptoms are absent, and, moreover, the pus is never visible in the discharges. It may be asked whether this is not a more frequent occurrence than physicians generally believe.

You will remember that when speaking of the probabilities of suppuration in the two cases which we have made the basis of these lectures, it was stated that an abscess would be more likely to occur in the puerperal than in the non-puerperal patient. This opinion is based upon the absence of any signs of suppuration, and the indolent condition of the pelvic swelling, in the latter woman, as well as upon the known fact that suppuration of pelvic inflammations is much more frequent in puerperal than in non-puerperal women. If I may hazard an estimate from my recollection of cases which I have seen, I should say that four or five times as many of the former as of the latter end in abscess.

You should remember, however, that the detection of pus in these abscesses is exceedingly difficult, unless it is approaching the abdominal walls. It is no easy matter to positively assure oneself that a given pelvic tumor contains purulent matter, even if the examination be made immediately before it opens into the vagina.

One of the most important subjects which is to be considered in connection with pelvic inflammations, is their etiology. It is to be hoped that you have not forgotten the fact that our non-puerperal patient is a prostitute, and that when she entered this hospital it was in order to be treated for chancres and gonorrhœa. You are not to think that this is an unimportant point in the clinical history, for such is not the truth. Blenorrhagia is one of the most frequent causes of pelvic peritonitis, and the disease is a very common one among prostitutes. Bernutz* has called attention to this fact, and out of ninety-nine patients under his care, with pelvic peritonitis, it had its origin in blenorrhagia in twenty-eight instances.

On the other hand, the association of the disease with the puerperal state is also an important clinical fact. This, too, is a very fertile cause of pelvic inflammation in women, for forty-three of Bernutz's ninety-nine patients were lying-in at the time the disorder occurred. On comparing an equal number of cases of each, it will be found that the affection is more frequent after abortions than after labor at full term, though this does

* Clinical Memoirs on Diseases of Women, p. 41, New Sydenham Society's edition, 1866.

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not appear as a matter of course in the ordinary statistics of the disease, as normal labors are so much more frequent than miscarriages.

In our puerperal patient you remember that the pain and tenderness in the right iliac fossa were preceded by enlargement, pain, and tenderness of the uterus. This fact was emphasized in reading the clinical history. Let me dwell upon it now; for I believe it to be a very important point in elucidating the causation of the affection. Non-puerperal women who are suffering with an inflammatory disease of the uterus, and especially with endometritis, are peculiarly liable to pelvic peritonitis and cellulitis, and it is in these cases that you are to be particularly wary of irritating applications to the os or the lining membrane of the cervix or cavity of the uterus. Allow me to illustrate this statement. A few years ago I was called to see a young girl who was suffering with an enlarged congested uterus, the os of which was slightly eroded. I touched it lightly with a solid stick of nitrate of silver. This was done early in the day, and during the succeeding night pelvic pain and tenderness with fever set in, followed by the formation of a tumor, and displacement with fixation of the uterus. She was confined to bed for several weeks, but finally recovered without suppuration.

A young woman in this hospital had a distinct ulcer on the vagina, just at its junction with the posterior lip of the cervix. It was freely touched with nitrate of silver. Thirty-six hours later she had pelvic peritonitis, from which she died two days afterwards.

In the same ward, and in the next bed but one, on the same day, was a woman with an intensely congested uterus and a much eroded cervix. The sound showed that the organ was enlarged, and its lining membrane was manifestly inflamed. The quantity of blood in the uterus was so great, and the superficial vessels of the portion visible through the speculum were so much distended, that I directed Dr. Bottsford, at that time my resident, to make six punctures, three on the anterior and three on the posterior lip of the cervix. The bleeding was free, but the operation was followed by a violent attack of pelvic inflammation, which went on to suppuration, and the abscess finally *broke* into the rectum. This occurred nearly three years ago; and a month since the same patient was readmitted to this hospital with the abscess still discharging at intervals through the rectum. I could relate other equally striking examples, but these are sufficient. The death of the former and the permanent ill health of the latter of these patients are enough, if there were no other reasons, to cause me to urge you to be exceedingly careful how you make any irritating application to the os and lining membrane of the cervix and cavity of the uterus, if the patient is suffering from endometritis.

This applies not only to the use of such agents as nitrate of silver and local depletion, but with equal if not greater force to the use of sponge tents, intra-uterine injections, and even of the uterine sound. I have in one instance seen death follow the introduction of sponge tents, and serious symptoms have several times resulted from their use in my patients, notwithstanding the adoption of every precaution.

The relation of endometritis to these diseases is too important for you to forget. The connection in non-puerperal patients is clearly demonstrated; and it is my conviction from the symptoms in A. W——, as well as in other cases which have occurred in the wards during the last year, that the association between inflammation of the uterine lining membrane and the puerperal variety of the disease is just as close. This leads us to the consideration of the causes of endometritis in the lying-in woman. It is to be feared that the disorder and its sequel, if our opinion is correct, are sometimes the direct consequence of officiousness upon the part of the young and inexperienced accoucheur. The prominence given by some obstetric teachers to the necessity of knowing that the uterus is perfectly empty after delivery, and especially that it contains no clots, induces many to pass the hand or the fingers into the cavity of the organ, the one before and the other after the delivery of the placenta. Many physicians, too, do not allow the third stage of labor to proceed naturally, and some employ considerable force in delivering the placenta. The truth of this assertion is proved by the very frequent statements of young men that they have met with examples of "adherent placenta." It has been my fortune to be brought in contact with many gentlemen just entering upon the practice of their profession, and so important has been the influence of this teaching, that I hardly remember one who was at all satisfied without scraping out the uterus to remove coagula and fragments of the placenta and membranes. I have seen many cases of pelvic inflammation, and some of them, it is to be feared, had their origin in irritation of the uterus during and at the end of the third stage of labor. It was only after several years' experience that I was induced to abandon the same erroneous practice. Now it is with the utmost hesitation that I attempt to pass the hand or fingers into the cavity of the uterus, and, as the abdominal walls are always lax and flabby immediately after delivery, the womb can be emptied in almost every instance by the simple supra-pubic manipulation recommended by Credé for the delivery of the placenta.

All cases of puerperal pelvic inflammation do not have their origin in mechanical irritation or injury of the internal surface of the uterus, however. It may be that in some instances, as is asserted of puerperal fever, it is the result of the direct inoculation of some materies morbi upon the uterine surface. Under certain circumstances the affection becomes epidemic, and then it undoubtedly has an atmospheric origin. In this class of cases, as well as in the others, the peritoneal inflammation is preceded by enlargement, tenderness, and pain in the uterus.

Treatment.—In the history of the puerperal woman, you remember that the disease was treated at its onset by counter-irritation with turpentine stupes, the administration of a sedative febrifuge, and the use of vaginal suppositories of belladonna. This is briefly the treatment which we have generally employed here in the first stage of the disease. If the progress of the affection is arrested at all, it is to be done by early and prompt treatment. I am inclined to believe that it would have been better had we leeched this woman (A. W——) early in the disease,—that is, before or immediately after the time when the pain and tenderness ceased to be confined to the uterus. A few ounces of blood taken then, in connection with the other treatment employed, might have arrested the inflammation and prevented the monthly relapses, of which you have heard the account. I have frequently used local depletion in the treatment of pelvic peritonitis, and originally applied the leeches over the hypogastrium or the iliac fossa, but latterly I have applied them around the anus. This is the better practice, for in the former instance the attempt is made to deplete the uterus and pelvic peritoneum through the thick and muscular abdominal wall. Between these structures there is no direct connection; while the vessels of the uterus and adjoining parts communicate with the hemorrhoidal veins, and you more directly deplete the parts involved in the inflammatory process by placing the leeches near the anus. Do not hesitate to employ leeches if you have to treat a strong and previously healthy patient. Sensitive and modest women will object to their application in this position, but, if properly performed, the pro-

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cedure involves no more exposure than if they are placed above the pubis.

The use of turpentine as a counter-irritant is very common in this hospital, and when applied to this woman it was preferable to blistering, which is always inadmissible in the early stage of the disease. The most that you should do at this period is to use mild counter-irritants followed by poultices.

The fever mixture prescribed consisted of syrup of ipecacuanha, with ordinary neutral mixture, and spirits of nitric ether. The important agent was the ipecacuanha,—a drachm of the syrup of which was administered every three hours, with the intention to produce and maintain nausea for a little time. The treatment had no manifest influence upon the course of the disease; but I think that I have seen cases in which it has arrested the inflammation. If the patient be very stout and plethoric, and is first seen before the affection has lasted twenty-four hours, I should not hesitate to employ a stronger sedative,—tartarized antimony. One or two large nauseating doses of this should be given, in order to produce a quick and profound impression, which should not be maintained for any long period. What you desire is to produce very decided nausea without vomiting, but with profuse perspiration and diminution in the frequency and force of the pulse.

If this is not effected early, I have never seen any good follow the use of these depressing febrifuges, but, on the contrary, they are positively injurious, by weakening the patient and by diminishing her power to resist the tendency to suppuration. Hence, if the patient is not seen early, or if the remedies alluded to, do not have the desired effect at once, you had better abandon them, and be content with the employment of milder measures,—simply to relieve the woman's pain, and to support her strength for that period when her comfort will be sacrificed and her life, it may be, endangered by suppuration.

In the first or active stage of the disease the relief of pain is a matter of no small importance. Our present patient, as you have heard, used vaginal suppositories of belladonna. I have for several years been in the habit of prescribing this drug when the patient is suffering severe pelvic pain, whether it be acute or chronic. In some cases the remedy appears to act most happily. In others it fails. It seems to be preferable to administer it in the manner specified, because there is often vomiting, and because the application is made almost directly to the diseased part. From two to four grains of the extract may be thus used once or twice daily. That the remedy is active when administered in this way is proved by the fact that dilatation of the pupil, and the other constitutional symptoms of the drug, sometimes quickly manifest themselves.

If the belladonna fails to relieve pain, you will have to resort to opium or its preparations, which may be administered either by the mouth, the rectum, or the vagina, or by hypodermic injection. I confess to having a preference for the third and fourth methods.

There is always a question in regard to the propriety of administering a dose of purgative medicine to these patients. If there is any reason to believe that the bowels are loaded, it is well enough—nay, it is right—that they should be emptied by a cathartic or an enema; but there is no indication for anything more than this. Drastic purgatives are to be avoided in all stages of the disease. All that you have to do with the bowels is to prevent an accumulation of hardened fæces, and, aside from this, all interference with these organs is not only useless, but positively injurious. In many cases, owing to the close proximity of the inflammation to the rectum, and the intimate sympathy existing between all the pelvic organs, the irritability of the bowel may be so great as to demand treatment. Or, if this symptom is absent, you will find it no difficult matter to produce it by the improper administration of cathartics, while by the same means you may increase or maintain a waning pelvic inflammation or decide the course of the disorder as regards resolution or suppuration. These remarks apply to the use of purgative medicines during the whole course of an attack of either perimetritis or parametritis.

As pelvic peritonitis progresses, however, there sooner or later comes a time—generally from the fifth to the ninth day—when the fever remits and the pain diminishes with greater or less suddenness. New principles are now to guide you in your treatment. It is now your object to prevent suppuration and diminish the severity of the monthly exacerbations which are so apt to occur. At this time all depressing local or general remedies are to be abandoned. It is now, if at all, that a blister will be useful, and it sometimes seems as if the application of one is rapidly followed by complete cessation of the remaining pain and a rapid diminution of the inflammatory induration. The production of strangury is the only danger from its use, and it is said that it is not infrequent. I have never met with it in these cases, but it is easy to believe that it would be likely to occur in certain instances, for difficulty and pain in passing water are among the symptoms of the disease. It is probably better to limit the use of the remedy to those cases in which these are absent.

If you deem it inadvisable to employ cantharides, you should at least freely paint the hypogastric and iliac regions with tincture of iodine, or this agent may be employed after the blister has healed. In some instances I have used mercurial ointment locally. I do not know that any good has followed its application. In other cases I have prescribed an ointment of the biniodide of mercury, ten or fifteen grains to the ounce. This has the merit of being a counter-irritant of some power, while it may possess some of the so-much-lauded sorbefacient properties of mercury. Moreover, it rarely produces salivation, which may follow the application of the ordinary blue ointment.

Something may be done in the way of local treatment through the vagina. After Tilt,* I have sometimes employed suppositories of the ointment of mercury in connection with belladonna. It is better, however, to use other drugs. The one most frequently prescribed by some is the iodide of lead in the form of suppositories. I have never felt confident that the agent was useful when employed in this manner; but it can do no harm, and it would, therefore, probably be well for you not to neglect it.

As internal remedies, both of these women have been taking the syrup of the iodide of iron and the iodide of potassium. For a long time I have treated my patients with pelvic inflammation, after the subsidence of the acute symptoms, by giving them from ten to fifteen minims of the one, and the same number of grains of the other, three times daily. The iron is less constantly given than the iodide of potassium. What is the precise value of the latter remedy I shall not pretend to say; but I believe that it is very useful in these cases, and that it facilitates the absorption of the inflammatory products and thus tends to prevent suppuration, which is the great point in the treatment of all cases of pelvic inflammation, be they peritoneal or cellular.

You should not forget that, after the very first stage of the disease, no depressing remedy is to be prescribed, and that after the acute symptoms have subsided the patient is to be supported rather than exhausted. No principle is now more strongly insisted upon than that suppuration is increased, or a tendency to it made stronger, by debilitating the patient. Hence, by the

* Uterine and Ovarian Inflammation. London.

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administration of good food, and, if the depression is at all considerable, by the use of wine, in addition to the other remedies already alluded to, you are to prevent suppuration.

There is no more important element than rest in the treatment of these pelvic inflammations. I have most strongly insisted upon this in both patients presented to you, and the puerperal woman has persistently disobeyed my directions. This is no uncommon occurrence; and you have heard in the clinical history that she suffered severe pain after any unusual exertion. Women will constantly insist upon being up when your better judgment will inform you that they should be perfectly quiet, and you will hereafter often have the mortification to find your best efforts at treatment frustrated by the wilfulness of your patients. Remember, however, that you cannot insist too strongly upon the importance of rest in these disorders, and of absolute quiescence of the genital organs for a considerable period after an apparently perfect recovery.

In conclusion, I have but one word more to say. For a long time after the patient seems to have recovered from either perimetritic or parametritic inflammation, no matter whether it is puerperal or non-puerperal, you should be exceedingly careful how you treat any form of uterine disease from which the woman may be suffering; for one who has had either of these affections is for a considerable period very susceptible to any irritation of the genital organs, and exceedingly liable to fresh attacks of pelvic inflammation. At this very moment there is a patient in the ward who, after the birth of her last child, six years ago, had a pelvic abscess which discharged through the vagina. For the treatment of a uterine disease from which she is now suffering, sponge tents were introduced; and their use was upon two successive occasions followed by mild attacks of pelvic peritonitis.

ORIGINAL COMMUNICATIONS.

THE ORIGIN OF FIBRIN.

A THESIS FOR THE DEGREE OF DOCTOR OF MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

BY LOUIS S. STILLÉ, M.D.

Published by consent of the Faculty.

THE growth of physiological science may be compared to the formation of stalactites in limestone caverns. For ages, facts, diluted with theory, have percolated the Temple of Human Experience, depositing therein the amount of truth they contained, which by gradual accretion has reached an enormous bulk, while the ideas and opinions, at first necessary to enable the mind of man to digest the solid material, have entirely vanished. The progress of physiology has been so rapid during the past few years, and the accumulation of facts become so great, that some modification of the existing theories may naturally be expected, particularly of those relating to the blood and the uses of its various constituents. We have therefore selected for discussion this interesting and important subject, which is the basis of what are commonly known as the antiphlogistic doctrines, and has perplexed practitioners for many years. Fibrin has long been looked upon either as the chief element of nutrition, or as an effete material, destined to be excreted from the body. The most bitter controversies have arisen between the parties holding these opposite views, neither one venturing to assert that, after all, the very existence of such a substance as fibrin may require to be proved. Quite recently, however, several eminent microscopists and chemists, who have investigated the subject, have reached a most startling and unexpected result, which destroys at one blow the most cherished doctrines of hyperinosis and hypinosis, and proves anew that the "post hoc propter hoc" method of reasoning is not to be depended upon in therapeusis. In order to understand the present view, it becomes necessary, first, to determine what fibrin is; then, to consider its existence or non-existence in the blood; and, finally, to seek the most plausible theory of its origin.

What is fibrin? When healthy blood is withdrawn from a living animal, it presents the appearance of a homogeneous red liquid, but if allowed to remain at rest and at the temperature of 90° F., it soon undergoes a change, by which it is converted into a semi-solid mass closely resembling currant jelly. This change, known as spontaneous coagulation, has been shown by various observers to consist in the development of a network of minute fibres throughout the liquid, and these fibres are therefore spoken of collectively as fibrin.

Does fibrin exist in the blood? It is evident that a substance which has been obtained from a liquid can only pre-exist in that liquid under one of three forms, —solid, liquid, or gaseous,—and that fibres can be present only as fibres, or as minute molecules having a tendency towards aggregation in straight lines. Filaments of fibrin are very minute, and therefore, it may be objected, are not easily seen under the microscope unless aggregated, and may be supposed to exist like filaments of horsehair in syrup; but, unfortunately for the correctness of this supposition, single fibres of fibrin can be seen under the microscope and the process of fibrillation watched. Thus, Lehmann says, "There appear here and there individual points or molecular granules, from out of which very soon extremely fine straight threads spring;"* and Addison, "Exceedingly delicate and perfectly cylindrical fibres, having a diameter even less than that of the molecules, first appear crossing the field of the microscope;"† whence it is evident that fibrin is formed with its recognized physical properties only in the act of coagulation. In the filtration of blood, moreover, there is no separation of fibrin previous to coagulation, whereas if fibrinous filaments existed in suspension, they should remain upon the filter irrespective of such change. The hypothesis that fibrin exists in the form of molecules (independently of the corpuscles) is disproved by the experiments of Mr. Lister,‡ who found that when the corpuscles are removed from the blood it is absolutely incapable of coagulation. By molecules of fibrin we here signify particles of the same composition with fibrin, and not the primary molecules of Gulliver, or the bioplasm of Beale, which will be hereafter considered. There now remains only one condition in which fibrin may exist in the blood,—that of a liquid, since the supposition of a gaseous state is absurd. A liquid can become solid (in all human experience) only by evaporation or crystallization, and these have been shown not to be requisite in the formation of fibrin. Evaporation may be prevented by covering the blood with oil, by enclosing it in a mercurial vacuum, or by ligature of a vein, and yet coagulation will take place. The resemblance of fibrillation to crystallization is more apparent than real, since the conditions for the development of the one are totally different from those required by the other. Cold and rest together prevent the production of fibrin, while they accelerate the formation of crystals. Agitation hastens coagulation, while it retards crystallization; the one

* Jones and Sieveking's Pathological Anatomy, p. 29.
† Transactions Provincial Med. and Surg. Association, vol. xi. p. 241.
‡ *Lancet*, 1863, p. 140, *et aliunde*.

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forms crystals of an indefinite size, which may be redissolved by heat, while fibrinous filaments are of a definite size, and cannot be redissolved by heat. If we add to these the statement of Virchow, that venous obstruction will cause exudations of all the admitted fluids of the blood except fibrin, and the notorious fact that pure liquid fibrin has never been isolated, the conclusion seems to be perfectly justifiable that fibrin, as such, does not exist in the blood.

If it is not found as fibrin in the blood, and yet is formed by the components of that liquid, the question arises, What are these component parts, or rather proximate principles, of the blood, and what relation do they each bear to fibrin? It suffices for our present consideration of this subject to regard the blood as being composed of albumen, salines, red and white corpuscles, and water. Of these, water, salines, and red corpuscles may be excluded, as none of them form fibrin by themselves, or when in combination, and the latter (corpuscles) may be filtered away from blood without hindering coagulation. Albumen, however, is a substance which, universally distributed through animated nature, forms the material from which all living structures are derived, and, therefore, must be looked upon as the essential origin of fibrin, as of all organic tissues. Containing the four elements of organic nature in large proportions, it would seem to be the fittest representative of the universal pabulum, or food, as distinguished from the bioplasm, or living organism which feeds upon it. Its distinguishing characters to the physiologist are coagulation in white flakes by heat or nitric acid, and liquidity at the temperature of the body. That fibrin is formed from albumen can be demonstrated by the following facts: "The chyle contains more albumen and less fibrin than the blood; consequently a part of the albumen must have been converted into fibrin. The chyle, immediately after being absorbed by the lacteals from the intestines, contains more albumen and less fibrin than that which has passed through the mesenteric glands. The arterial blood contains more fibrin and less albumen than the blood in the veins, and this can only result from the transformation of the latter material into the former."* Prof. Brücke, after a large number of careful analyses of the blood of animals, remarks that "we have no further inducement to suppose that there exists in the blood-plasma a peculiar substance,—so-called fluid fibrin,—but are now compelled to admit that solid fibrin is formed at the expense of a part of the albumen dissolved in the plasma."†

The language which is here employed is noteworthy. A *part* of the albumen alone is changed into fibrin; why not all of it? What peculiar influence resides in this changeable portion which is capable of altering its physical condition? To ascertain this point, and led by several observations on the chemical nature of fibrin, Mr. A. H. Smee discovered that a current of oxygen gas, being passed through various albuminous fluids, gave rise to a substance apparently identical with fibrin, both physically and chemically.‡ This fact, however, though explaining how albumen may be converted into fibrin by the oxygen in the blood derived from the lungs, does not answer so well in its application to the fibrin of chyle and lymph, which are formed, the one from food, the other by a retrograde metamorphosis of tissue. It is true that the fibrin in these liquids is imperfectly formed, but the knowledge of its existence in these situations is sufficient to argue that oxygen is not the only factor. Besides this objection, there is the present theory of the non-existence of free oxygen in the blood as distinct from the red corpuscles; and, since these are not requisite to coagulation, the inference likewise is that oxygen is not essential.

Let us suppose, however, that the white corpuscles are oxidized albumen (which is merely a supposition, since they have not been analyzed), and trace the connection between them and fibrin. If it can be proved that these corpuscles bear a constant relation to fibrin, that the two increase and decrease simultaneously, that the presence of the one invariably coincides with that of the other, and that the corpuscle has been seen in the act of converting itself into filaments, it would seem almost certain that fibrin is only another name for the white corpuscle. And this is precisely the character of evidence which we are able to offer in this case. Premising that the primary molecule of Gulliver, the protoplasm of Max Schultze, and the bioplasm of Beale are all different names for the white-, chyle-, and lymph-corpuscle, we will present the evidence as briefly as our space will allow.

The first situation in which fibrin is found and in which it did not previously exist is in the central lacteal vessels of the intestinal villi (Gulliver)§ during the absorption of chyme. Drs. Carpenter‖ and Kölliker¶ demonstrate the presence of white cells in this chyle. In the mesenteric glands, fibrin and corpuscles suddenly increase in amount. Recklinghausen** observes that the follicular substance of these glands is probably to be regarded as the chief formative centre of the cells, while Salisbury†† describes the formation of such corpuscles in the follicles. From the commencement of a villus, then, to the termination of the lacteals in the thoracic duct, fibrin and corpuscles steadily increase together, until they are poured into the general circulation. The same may be said of the contents of the lymphatic vessels, though the origin of the lymph is purely conjectural. The only physiological increase of fibrin in the blood occurs during digestion and pregnancy, both of which conditions are also distinguished by an increase of white cells (Becquerel and Rodier; Virchow).

In certain diseases a notable increase of fibrin occurs, and Virchow assures us that such increase is always accompanied by a similar one of the colorless corpuscles.‡‡ The absence of fibrin has been observed in cases of toxæmia from various causes, such as poisoning by hydrocyanic acid, etc., typhus, purpura, scorbutus, and advanced tuberculosis. Unfortunately, however, the normal proportion of white corpuscles in the blood is so small that no satisfactory evidence can well be given of their decrease.

The so-called inflammatory lymph has been shown by Paget to bear a close relation to the blood as regards the quality of fibrin formed by the two liquids. As the clot of blood drawn from the arm of a patient suffering with pericardial effusion is firm or loose in texture, so may the false membranes be expected to vary in consistence. Addison,§§ Beale,‖‖ and Chalvet¶¶ have demonstrated the presence of colorless corpuscles in these plastic exudations; while the recent investigations in Germany by Cohnheim, confirmed by Woodward and others in the United States, supply the missing link in the chain of evidence, by proving the plastic corpuscles to be identical with the white cells of the blood, It would thus appear that fibrin is always associated with

* Rudolf Haas, *London Journal of Medicine*, vol. ii. p. 648.
† *British and Foreign Medico-Chirurgical Review*, vol. xix. p. 208.
‡ Proceedings of Royal Society, vol. xii. pp. 399 and 505.

§ *Times and Gazette*, 1863, vol. ii. p. 553.
‖ Physiology, London, 1842, p. 460.
¶ Stricker's Histology, Syd. Soc. ed., vol. i. p. 342.
** Stricker's Histology, *loc. cit.*
†† *Amer. Jour. Med. Sci.*, April, 1866.
‡‡ Cellular Pathology, p. 199.
§§ Experimental Researches, London, 1843.
‖‖ Archives of Medicine, London, 1861, pp. 251–2.
¶¶ Thèse de la Physiologie pathologique de l'Inflammation, Paris, 1869, p. 38.

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the colorless corpuscles in the chyle, lymph, blood, and plastic exudations; and, since it has been previously ascertained that fibrin does not exist in the blood apart from these cells, the inference must be either that the corpuscles constitute fibrin, or that they unite with some element of the serum in order to produce it. In both cases their presence is absolutely necessary to coagulation. If the hypothesis that the white corpuscle is composed of oxidized albumen be accepted, the only difficulty would consist in understanding how spherical aggregations of molecules can become linear in form. Barry, Beale, and Salisbury tell us that they do so change their shape, and Prof. Kirkes says that the white corpuscles cannot by any mode of analysis yet invented be separated from the fibrin of mammalian blood. This statement is manifestly correct if the corpuscles are fibrin: and at this point some reference must be made to the faulty method of analysis which has been used. A specimen of fresh blood is examined by the microscope, in order to determine the number or amount of corpuscles. In order to determine the amount of fibrin, the *microscope* is *not* used, but the blood is whipped, or allowed to coagulate, and the amount of fibrin calculated by scales and weights. How can it be asserted that the corpuscles have not been weighed under another form and called by the name of fibrin? The reply is quickly given: by defibrinating a specimen of blood and examining the serum for corpuscles. Let Andral* give the result of his observations upon this subject: "When we in any way deprive the blood of all its fibrin, we no longer find white corpuscles in the field of the microscope;" and again, "The whole of the fibrin is held in suspension in the blood under the form of white corpuscles, one-five-hundredth of a millimetre in diameter."

This conclusion has also been reached by Barry, Beale, Horn,† Addison, Salisbury, and Mantegazza,‡ independently of one another, and the theory has been propounded that pus-cells are merely white corpuscles which have lost the property of assuming a filamentous condition, and consequently retain the spherical appearance. The discussion of this view need not at present occupy our attention, especially since the most important part of the subject yet requires consideration.

It has been shown that the presence of white corpuscles is indispensable to the production of fibrin, and that the probabilities are very strong in favor of considering them as one and the same substance,—viz., oxidized albumen; but a careful analysis of the proofs advanced must still be made. The experiments of Alexander Buchanan, in 1836, on the admixture of serous fluids, and the more recent experiments of Schmidt upon the same subject, render it probable that although no fibrin may be formed, as a physiological process, distinct from corpuscles, these bodies may nevertheless represent only one of the factors in its production. A substance has been found in blood-serum which is apparently as essential to coagulation as the white corpuscles. This material Kühne has named paraglobulin. If extracted from freshly-drawn blood, no coagulation occurs in that liquid until it is replaced. If added to hydrocele fluid, which at best forms only a small coagulum, instantaneous fibrillation is the consequence. From such well-attested facts there is no escape, and, therefore, the previous conclusions must be modified; and, instead of saying that the corpuscles *are* fibrin, we now assert that they *make* fibrin. For the corpuscles are organisms, and when an organized body acts upon an unorganized one, and a third body is produced, the active part is always ascribed to the former. There is yet a wide field open for research in tracing the origin of the paraglobulin.

To recapitulate. Fibrin does not exist as such in the blood, but is a product of the action of the white corpuscles upon a material named paraglobulin, existing in the serum.

"Its appearance, its coagulation, are signs of its formation."—*Robin.*

* Pathological Hæmatology, translated by Meigs and Stillé, 1844, pp. 34 and 35.

† *Ranking's Abstract*, 1848.

‡ Nature, vol. i.

MEDICAL NOTES.

No. IV.

BY JAMES E. REEVES, M.D.,

Wheeling, W. Va.

VI.—Enteric or Typhoid Fever.

FOR more than twenty years I have studied this disease attentively, as it occurs in West Virginia, and know certainly that it frequently springs up in the same or in different localities without assignable cause, and in the midst, seemingly, of the most diverse sanitary surroundings. Imperfect ventilation and overcrowding, with its accumulated filth, drinking-water contaminated with sewage, fermentation and decomposition of fæcal exuvia, the opening of sewers, cesspools, etc., may have much influence in its production and spread; but, in the language of Dr. Guy, are not these sources of pollution more often the *nurse* than the *parent?*

The history of enteric fever in West Virginia has shown satisfactorily to my mind that the disease is not confined to those localities which year after year are most filthy because of defective sewage, sluggish streams, and the carrying on of offensive trades and manufactures. On the contrary, if any difference has been observed, these so-called unhealthy, *fever-producing* localities—for example, the neighborhood of slaughter-houses, soap and tallow-candle factories, etc.—seem often to be protected above the measure of exemption common to the best and most delightfully-situated neighborhoods, both in cities and in the country. At least, I am quite sure that the dens of filth and sources of the foulest emanations in the city of Wheeling are *not*, as a rule, the localities which are most frequently visited and scourged by the disease. Indeed, the truth seems to be this: it more frequently passes by the denizens of the lanes and alleys, including also those residing in the vicinity of the outlets of sewers along the banks of Wheeling Creek and the Ohio, and attacks those in comfortable life,—the families of merchants and thrifty tradesmen residing in the most beautiful neighborhoods. It exhibits, also, a marked tendency to strike down the young, recent residents of a locality, as well as those who live on elevated grounds, and to prevail with greatest frequency and fatality during the fall, winter, and spring months.

Now and then the *causative* influence may seem such as to favor the doctrine taught by Dr. Murchison,—that apostolic light of *pythogenesis*,—who, by his reasoning concerning the origin of the Croydon, Windsor, and Westminster epidemics, the Clapham school case, etc., has, according to Dr. Aitken, "rashly committed science to an hypothesis of a doubtful nature;" but the facts, easily deduced in the main from the every-day history of the disease as it occurs all over this country, do not support his dogma.

Exactly as scarlet fever, measles, chicken-pox, hooping-cough, diphtheria, etc., come around in uncertain cycles and break out spontaneously—*i.e.* without the least trace of association with antecedent cases—in cities, towns, villages, schools, work-houses, country places and settlements, including farm-houses of all

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descriptions, built upon the hill-tops, in the valleys, on the mountain-side, along creeks and rivers, and far off from the pernicious influences of decaying vegetable and animal matter, stagnant pools, drains and filthy sewers, so does enteric fever often appear; and in its mode of access and succession of symptoms, it so closely resembles the family of eruptive fevers that it might with much propriety, I think, be classed among the *exanthemata*. The presence of the eruption is almost as uniform as that of scarlet fever. If diarrhœa is profuse and persistent, the eruption is sparse and soon fades; and when the disease is fully developed, it runs its given course. There is also a similarity of attraction or elective affinity of the morbid poison for certain eliminating surfaces, the choice of which as distinctively marks the specific or independent character of the disease. In scarlet fever the tonsils are the normal excreting surfaces, and a well-known form of *angina* results; in diphtheria there is another and certainly very different blood-poison, having a like affinity for the same parts of the throat; but the nature of the local morbid action in diphtheria is wholly unlike that which occurs in scarlet fever; and so far from being *antagonistic* poisons, or protective one against the other, they may co-exist,—a fact which I have several times witnessed. In like manner the specific poison of enteric fever has an elective affinity for the surface of the small intestine,—the Peyerian and mesenteric glands; and the lesions which are produced by the process of elimination in these, its normal excreting surfaces, are so constantly and precisely the same, that they stamp enteric fever as specifically distinct from any other febrile or local inflammatory affection, as scarlatina is different from diphtheria, or measles from smallpox.

Again, the poison of enteric fever is antagonistic of no other blood-poison; neither is it *protective* against any except its own recurrence in the bodies of those who have been once attacked; and the immunity thus conferred is as reliable as the safety from a second attack of scarlet fever, measles, or smallpox. To this fact my attention has been particularly directed, and in all my experience I never knew a patient to have the disease a second time.

That enteric fever is generally a contagious disease, sometimes *feebly*, at other times *actively* so, is a truth I can no more doubt than I can doubt the existence of the disease itself. I have said "generally contagious," because, as has already been shown, the disease is very frequently developed *de novo*,—a fact proved by its frequent appearance in isolated rural districts when after the strictest search it has been found utterly impossible to trace even the most remote connection with antecedent cases; but after such spontaneous production, it may become feebly or actively contagious, according to the quality of the predisposing cause and the fitness of the individual recipient for the action of the poison.

This question, however, of the *generatio de novo* of diseases which may afterwards propagate themselves by contagion is a most difficult and perplexing one; but it should be borne in mind that there are many truths in medicine which are not demonstrable, which are truths nevertheless. If we cannot explain how some persons escape the contagion of smallpox,—even cannot be made to receive it by inoculation,—how vaccination may fail to-day and prove successful two weeks hence,—what is the nature of the specific poisons of scarlet fever and diphtheria, and why their affinity for the tonsils,—why the poison of mumps should have an affinity for the *parotid gland*,—what is the nature of the poison of enteric fever, that it should have so marked an affinity for the elliptical plates of the ileum,—how these poisons respectively enter the blood, and by their *catalytic* action purge from it their own future possibility of recurrence,—if all these phenomena, which are *truths* in spite of the mystery which envelops them, cannot be explained, is it less strange that we are unable to account satisfactorily for the spontaneous origin of disease and its subsequent spread by contagion, examples of which are constantly occurring?

Treatment.

Twenty or twenty-five years ago, general bloodletting and active mercurialization constituted the rule of practice in the management of this fever, and then death gathered an indiscriminate harvest. There is still great uniformity of practice among all well-informed and experienced practitioners, but, fortunately, in an opposite direction to the old plan, and with it the result that, while the disease has lost none of its former gravity and real danger, there is no other acute affection, perhaps, of like serious character, which, under proper management, more often terminates in recovery. A considerable experience in its treatment has led me to regard no case, however mild it may appear, as free from danger; on the other hand, no case is so grave but that the patient may recover.

It should be remembered that enteric fever is a disease which cannot be suddenly broken up by any method of treatment; that an attempt to interrupt its progress by active measures—the so-called heroic plan—would be risking the life of the patient; that the natural tendency of the disease is towards recovery; that many cases will end favorably without medical treatment; a goodly number also will recover in spite of a very bad treatment, and from this fact too often has resulted confidence in a course of practice which, nevertheless, may have lengthened the duration of the disease and greatly prolonged the period of convalescence; that the best guide in the treatment is to study the epidemic or prevailing medical constitution,—the *tendency* to this or that mode of death,—and work accordingly and cautiously.

Isolation and ventilation are of the very first importance in the successful management of this fever, and their sanitary influence is well illustrated by the striking improvement a patient always manifests in from twelve to twenty hours after removal from a small room and a confined atmosphere to a large, well-ventilated chamber, without other change of treatment. I am well satisfied that the importance of thorough ventilation—by which I mean an abundant supply of fresh air constantly admitted to the sick-room—is not sufficiently regarded even in our best treatises on fevers. My own plan of management is as follows:

1. The patient, if possible, should have a separate room, and the presence of but one attendant or nurse at a time permitted. At least one thousand cubic feet of pure air, of proper temperature, should be supplied every hour to each patient and attendant, and care should be taken to have the bed- and body-clothing changed every day, or every other day.

2. Feed the patient moderately, allowing from a pint to a quart of good fresh milk daily, and, as the disease advances and prostration increases, the additional support of animal broths and essences.

3. Keep the patient in bed, or at least confined to the recumbent posture, even if he is apparently not very sick. Such timely care may possibly save him from perforation of the bowels and sudden death. The mildest cases, seemingly, are most exposed to this occurrence, and such a termination, in the majority of instances, is properly chargeable to the persistent exercise of the patient out of bed, if not out of doors. These "walking cases" are full of danger both to the life of the patient and the reputation of the physician, and are therefore always to be dreaded in practice. A sharp, open case is far more favorable and satisfactory to deal with.

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4. To moderate the violence of the disease and prevent dangerous complications, the tinct. verat. viride, with chlorate of potash or with the liq. ammon. acetas, is perfectly safe and reliable, and may be administered in the dose of three or four drops (of the saturated tincture) every three or four hours. It controls the pulse, diminishes the temperature, and, in all ordinary cases, the patient is far more secure and comfortable under its influence.

5. To restrain too frequent action of the bowels, the subnitrate of bismuth, in the dose of twenty or thirty grains, with or without the addition of prepared chalk and Dover's powder, administered two or three times a day, accomplishes excellent results. If much tenderness of the abdomen exist, sinapisms, fomentations, and the oiled-silk covering afford great relief, and assist in the recovery of the patient. To prevent constipation during convalescence, look to the diet, and, should such regulation prove insufficient, any one of the tonic laxatives may be employed.

6. There is truly a "quinine tongue" in enteric fever, and its unerring indications are worthy of the most attentive regard. A large, pale, and relaxed or flabby tongue, whether clean or loaded, demands the use of quinine. In such conditions it will act like a charm. On the contrary, when the tongue is small or contracted, pointed, and red at the tip and edges, quinine if used surely does harm; but here, fortunately, opium is the great remedy, and the patient may be safely trusted to its influence so long as these conditions last.

7. To quiet nervous agitation, and procure rest and sleep, opium and camphor, Hoffman's ether, or the bromide of potassium in the dose of twenty or thirty grains may be employed. If opium in any form disagrees with the patient, the addition of the bromide of potassium to the dose usually soothes its action, and produces a better effect than when either remedy is administered singly. But should these agents singly or conjoined fail, then the hydrate of chloral may be given in the dose of fifteen or twenty grains every hour, until quiet and sleep are produced. Now and then I have witnessed the happiest effect from this dose,—quiet and refreshing sleep, reduction in frequency of the pulse, and a not less marked lowering of the temperature of the surface.

8. The supply of alcoholic stimulants in liberal doses is sometimes absolutely essential to the life of the patient, but they demand great caution and the wisest discrimination in their use. In some cases the conditions that require to be met by stimulants and tonics are present at an early period of the disease. Commonly they are not needed until during the second or third week of grave cases. Again I say, *feed the patient* moderately from the beginning, and thus take advantage of an important power to prevent dangerous prostration during the latter stages of the disease.

9. The period of convalescence should be carefully guarded,—neither too much food nor too much exercise. With ordinary care, relapses are not common.

CAN MERCURIAL TREMORS COEXIST WITH CHRONIC LEAD-POISONING?—Dr. W. Ainslie Hollis reports (*British Medical Journal*, July 1, 1871) two cases in which many of the symptoms of mercurial poisoning coexisted with some of those of lead-poisoning. In one of the cases the man, who was a looking-glass silverer, was affected with muscular tremors of the upper extremities, weakness of the extensors of the hands, ptyalism, sponginess of the gums, and great fetor of the breath; but he also presented the blue line of lead-poisoning along the edge of the gums surrounding the incisors of both jaws, and had frequently suffered from griping pains in the abdomen. Both patients were relieved by a simple treatment.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, JUNE 7, 1871.

Reported by Dr. Elliott Richardson.

MORBUS COXARIUS.

THE first case presented was that of a little girl, aged 6 years, who had until last August enjoyed apparent good health. At that time she had an attack of hooping-cough, and during a paroxysm of coughing she was noticed to put her hand down to the left thigh and complain of pain in that locality. Since that time she has always walked lame.

The child was placed standing upon the table with legs and hips exposed, and a comparison was made between the two limbs. It was observed that the left limb was advanced, the knee flexed, and the toes everted. These symptoms, Prof. Agnew said, furnished three important points in diagnosis. Upon examining the parts in the neighborhood of the hip, other important diagnostic points were seen. The crease separating the gluteal region from the thigh posteriorly, which was normal and well marked on the right side, was entirely obliterated upon the left, the nates presenting a flattened appearance and merging imperceptibly into the thigh. The lymphatic glands in the groin of this side were enlarged. On making firm pressure upon the trochanter of the right thigh, no pain was experienced by the patient; but on repeating this experiment upon the left side, pain was felt. On placing the child upon her back, it was found impossible to bring the entire length of the back and the left knee in contact with the table at the same time; either the knee was elevated, or the lumbar portion of the spine was abnormally arched. When the limbs were brought down together, the left was found to be longer than the right, and motion of the diseased hip was found to be limited and attended with much pain.

Prof. Agnew said these were all symptoms of strumous disease of the hip-joint, which, in the larger number of cases, commences in the cartilage of the joint, but may have its origin either in the bone or the synovial membrane, and is often set up after an attack of measles, scarlet fever, or other exhausting disease of childhood.

The disease in this patient was in its first stage, that of elongation, caused by effusion inside the capsular ligament, by which the head of the femur is pushed outwards and downwards from the acetabulum, and, if not checked, will be followed by destruction of the acetabulum and the head and neck of the femur, by which finally shortening is produced.

The indications in this case, Prof. Agnew said, demanded two forms of treatment, local and constitutional. The first will be attained by such treatment as will keep the joint at rest and separate the articulating surfaces from each other, and by the application of derivatives to the surface in the neighborhood of the diseased joint. To accomplish these objects it was directed that the child be placed upon her back in bed and extension applied by means of adhesive strips, pulley, and weight, while at the same time small blisters should be occasionally applied to the hip. This treatment should be kept up until all evidences of active disease have disappeared.

To fulfil the indications for constitutional treatment, good and wholesome diet and the use of tonics were directed.

UMBILICAL HERNIA.

A woman, æt. 39, had protruding from the abdominal walls at the umbilicus a tumor about the size of an egg. This tumor was of a deeper color than the surrounding tissues, gave a sensation of fluctuation on palpation, and presented very much the appearance of an abscess. She stated that she had had this growth for two months.

Upon a superficial examination, the usual distinctive symptoms of hernia were not detected.

There seemed to be no change in the size or degree of tension of the tumor, whether she assumed the erect or the recumbent posture, and no succussion was felt when she coughed; but on taking it up between the fingers, Prof. Agnew said he

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found it to extend deep into the umbilical opening, and now, when pressing upon it, he noted a distinct gurgling sensation in the tumor, thus proving it to be a hernia. The hernia was reduced, and the patient directed to wear a suitable truss.

COMPOUND FRACTURE OF THE ORBIT.

A little boy, aged 9½ years, was struck ten days ago with an ice-hook, which produced a lacerated wound of the upper eyelid, and broke off a small spiculum from the orbital border of the frontal bone.

The wound was situated near the inner canthus, and had separated the punctum lachrymale from the canaliculus. It had healed rapidly, but, as the edges had not been carefully approximated, an operation for the purpose of bringing them into better position was recommended.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. JAMES TYSON.

DIABETES MELLITUS—A SEQUEL OF RELAPSING FEVER—RECOVERY.

G. A., white, æt. 42; is single and intemperate; a native of Sweden; by occupation a sailor; has been in this country twenty-eight years, during which time he has enjoyed perfect health; his parents and other relatives were healthy. He was admitted into the surgical wards of Philadelphia Hospital, May 4, 1870, with leg-ulcer, the result of an old gunshot wound received in 1861. After remaining in the surgical wards two weeks, he was taken with relapsing fever, and transferred to the medical wards, May 24, 1870. He had a very severe attack, and on the 12th of July, 1870, had only been up for two weeks. From the commencement of his attack he was so dull that it was impossible to obtain a reliable history from him.

July 12.—Convalescence has been slow. Soon after being permitted to leave his bed he noticed that his feet were swollen, as they still are, the swelling being greater at night than in the morning. His appetite is good, and he feels pretty well, and would leave the hospital but for the swelling of his feet and legs. On examination, three days ago, his urine was found acid in reaction, light in color, with a specific gravity of 1040, and yielded to all the tests for sugar abundant evidence of the presence of that substance.

This morning the specific gravity of his urine is 1040; sugar is very abundant. The whole quantity of urine voided during the last twenty-four hours was 3600 cubic centimetres; it is very pale in color; none of the peculiar urinous odor is present.

July 13.—Quantity of urine not so great; sugar still in considerable amount.

July 15.—Quantity much less; specific gravity 1012; sugar diminishing. From this time until September 12 there was no response to the usual tests for sugar, but the urine continued abundant, reaching 2500 cc., and being seldom if ever less than 1700 cc., in twenty-four hours. Until August 1, before which the sugar disappeared, the treatment was tonic and expectant. Later he was placed upon the opium treatment, as recommended by Pavy, and the bromide of potassium, as recommended by Flint, Sr. The quantity of urine, as stated, continued abundant, though he appeared otherwise quite well.

TETANUS.

H. B., aged 12, of German parentage, was seized on Monday morning, July 25, 1867, with abdominal pain, which his mother attributed to "cramp." The pain occurred paroxysmally, compelling the boy to bend himself forward at its occurrence. His mother administered aperients, to no effect; and later on the same day when the paroxysms would come on while he was sitting in a chair, he would straighten out, supporting himself, as it were, on the edge of the chair by the posterior part of his thighs, and on the back of the chair by the posterior part of his neck. These symptoms increased daily, involving more and more of the muscular system, though he would walk about between the paroxysms. His bowels were moved with great difficulty.

On Thursday, July 28, at 9 P.M., I first saw him, when he lay upon the bed straight and rigid as an unbending board. At intervals of from two to five minutes paroxysms would occur in which the rigidity of his legs increased, but the flexors of the arms, fingers, and toes caused these members to be strongly inclined inwards. He was ordered one-sixteenth grain morph. sulph. every three hours.

On the following day he presented this condition: While upon the bed his muscles were rigid and his body straight, strongly suggesting the appearance of a frog tetanized by strychnia. At intervals of from five to seven minutes spasms would occur, in which the phenomena were like those described. When sitting upon a chair, however, in the intervals of the paroxysm, his legs would bend at the knee to embrace the edge of the chair, though immediately to be straightened on the occurrence of a spasm. There was evident difficulty in deglutition, but no trismus; and when the paroxysms set in, he would cry out for his father and embrace his neck during their continuance. The spasms seldom exceeded a minute in duration, and at such times only did he seem to be in pain. His pulse was 142, and respiration 44 in the minute.

It was with extreme difficulty that any history was elicited, but the following was noted:

During much of three weeks previous to July 25 there existed a linear suppurating sore in the second crease on the plantar surface of the left great toe. The boy had been running without shoes, but precisely how the wound was produced could not be determined. The father had placed over the wound a piece of shoemaker's wax, which the boy had removed, when there occurred a discharge of pus, which was evidently before retained by the wax.

Again, on Sunday evening, July 24, the boy stated to his mother that he had drawn a piece of bone from his foot, showing her a sharp spicule, half an inch long, pointed at one end, and about one-eighth of an inch wide at the other. The boy, in his imperfect way, indicated that the bone came from his right toe; but careful examination failed to reveal any point whence it undoubtedly came, the entire sole of the foot being scratched and scarred, as are usually the soles of barefoot boys.

Finally, on Wednesday, July 20, the boy had been with his mother upon an excursion on the river Delaware; had remained in the country all night, sleeping by an open window, into which a strong current of air was blowing. He also stated that while returning upon the following day, being very warm, he had removed his coat, and permitted the breeze from the water to play upon him when thus exposed.

It is not easy to decide which of the three possible causes was the most likely. In my opinion, either the first or the second would be sufficient to induce tetanus in an appropriate subject.

At the second visit, July 29, the opium was discontinued. He was ordered to be well nourished, to have a spinal ice-bag appropriately placed, and to take one-fourth of a grain of extract of calabar bean every third hour.

August 30, 11½ A.M.—He took the first dose of calabar bean at eight o'clock last evening, and up to this hour he has taken one and a quarter grains. Pulse 132; respirations 44; pupil about three lines in a room somewhat darkened. The drug has therefore produced none of its physiological impression. Convulsions recurred about once in two and a half minutes until 5 A.M., since when they have been separated by intervals of from five to seven minutes.

6 P.M.—Pulse 136; respirations 60; pupil three lines.

The patient soon after this began to sink, and died within three hours. The physiological effects of the calabar bean were apparently not produced, though one and three-quarter grains were administered before he died.

The case cannot, of course, be allowed any weight, for or against, in determining the value of the calabar bean in tetanus, since the physiological impressions had not been produced. The drug was obtained from a most reliable pharmacist.

No post-mortem examination was obtained.

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THE MEDICAL TIMES.
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EDITORIAL.

UNDETECTED POISONING.

WHENEVER sensational headings in the public prints announce the arrest of another "Modern Borgia,"—as every fresh poisoner of two or more individuals is popularly styled,—medical men begin to scan very closely all suspicious symptoms in their patients, expecting to become involuntary detectives in some interesting case of medical jurisprudence. An obscure form of gastro-intestinal inflammation, especially if it terminates in death, awakens a vision of arsenical poisoning, and an otherwise inexplicable coma is at once suggestive of opium. As the timid criminal sees "a policeman in every bush," so the startled practitioner looks wistfully at the evidences of a disordered stomach or a violent enteralgia, anxiously wondering whether his patient is likely to be the hero of a medico-legal investigation, and himself the principal witness for the prosecution. After the excitement of the hour has passed away, and the trial that stirred up so much bitterness and indignation has become a matter of history, the case of cholera morbus, which seemed destined to be invested with public interest from its suspected toxical origin, comes down again to its proper level as a simple uncomplicated disorder of the digestive apparatus, and the brain-symptoms, which were supposed to be ascribable to narcotism, once more become the index of a purely cerebral affection, which in its consequences, be they what they may, is devoid of any legal pains or penalties. The transient impression made by the judicial investigation may not be wholly lost upon the physician, but he soon fails to apply its lessons to his own cases, and becomes only partially alive to the probabilities of similar instances occurring in his own after-experience.

Undoubtedly an increased though superficial knowledge of forensic medicine is thus acquired under temporary stimulation, but it extends perhaps no farther than an acquaintance with the properties for good or evil of the special poison which has been the subject of heated discussion in the court-room. If medical jurisprudence were more generally incorporated into the teachings of the schools, as an essential branch of professional education, and every student instructed that this class of cases, which so frequently occupy a place on the police records, may at some future day interest and embarrass him in his personal practice, the even tenor of professional life would be rarely ruffled by those exciting incidents which disturb and agitate the great masses of the laity. A more thorough education in this respect would also obviate the confusion and disgrace that sometimes attend the examination of medical witnesses, who, in the hurried preparation or perhaps total want of preparation and digestion of their views for the witness-box, furnish conflicting testimony as to the effects of poison, etc., and give expression to diametrically opposite conclusions.

Another point of considerable interest and importance arises from the similarity of some of the symptoms of poisoning to those produced by general pathological causes. Cases of undetected poisoning are of much more frequent occurrence than is generally supposed, and even in the hands of the most skilled practitioners remain permanently unrecognized. Criminal abortion has of late years received decided attention, as being, by its ante-natal "murder of the innocents," a very serious cause of the destruction of human life; but the statistics of secret murder by slow or rapid poison after birth must ever remain unrecorded. It is possible that hundreds of deaths ascribed to natural causes in tables of mortality are due to the wanton and murderous designs of criminal parents or relatives, and that even adults often fall victims to the malevolence of false friends or insidious foes, their sudden deaths being perhaps, in the absence of a post-mortem examination, ascribed to heart-disease or apoplexy. We must not for a moment persuade ourselves that the cases which once in a while agitate the public mind by their enormity or their atrocity are wholly exceptional, because others equally terrible have failed to be detected. It is clearly the duty of the physician to so cultivate and perfect his knowledge of the effects of poisons, and of their relations to criminal processes, that he may arrive with a tolerable degree of certainty at a correct differential diagnosis between these and the numerous other forms of physical suffering that afflict mankind. The history of every suspected case should be carefully traced out, and if the stain of guilt attaches to it, the physician should be the first to communicate his suspicions in a quarter in which the information may be made available.

THE MEDICAL PROFESSION AND THE TEMPERANCE QUESTION.

WE are rejoiced to see the medical profession at last taking a positive position with respect to the evils of excessive indulgence in alcoholic stimulants. That this is on the increase cannot be denied. The statistics of crime alone, to say nothing of other records, would be sufficient to awaken in every thoughtful physician a sense of the importance of an effort to cripple a power which threatens to undermine the very fabric of society. The statement of Dr. Mendenhall at the meeting of the American Medical Association for 1870, that "as conservators of public health it may be a subject for deep and earnest atten-

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tion whether we can do more than we have done to prevent the gigantic evils attendant upon the use of alcoholic stimulants," happily received an impulse at the hands of Prof. Alfred Stillé, who, referring to the custom of many physicians of unnecessarily prescribing alcoholic preparations, closed his scholarly address at the last meeting of the Association in the following words: "The habit is fraught with danger of stimulating the instinctive love of intoxication, and thereby entailing misery in comparison with which death is far to be preferred."

Of that greater evil, the sale of quack medicines which are largely composed of alcoholic preparations, we have unqualified condemnation. The Pennsylvania State Medical Society did well to adopt, at its late meeting, the following preamble and resolutions:

"*Whereas*, It is a fact that opium and its preparations, and numerous advertised and patented alcoholic compounds, as sold by druggists and others, are used as common intoxicants: therefore

"*Resolved*, That a committee be appointed, to consist of one member from each County Society here represented, or entitled to representation in this body, to be known as a Committee on Opium and Alcoholic Intoxicants, whose duty it shall be to collect such facts and statistics as may be within their reach, and make report thereon next year.

"*Resolved*, That the committee have power to fill vacancies in their own body, and to add to their number in localities where it may seem to be called for."

We sincerely hope that a legal restriction may reach the scoundrels who deluge the country with their vile trash, and that the apothecary may be brought in some way to appreciate the propriety of refusing to dispense this class of articles over his counter.

Besides the limitation of the sale or improper use of intoxicants as affecting society, the profession has to consider the results of prolonged license in the individual. To cure the drunkard if possible, to care for him as an unfortunate, and to protect society from his acts if he be incurable, are labors strictly in the line of professional duty. It is here, indeed, that the true temperance reform, viewed from a medical stand-point, may wisely begin, and it is from this vantage-ground that we may consider inebriety a disease, to be treated and classified as such. Drunkards may be conveniently divided into curables and incurables. There is little doubt that the curables—those periodic debauchees who drink only at times of unusual excitement—are in a majority of cases rendered amenable to treatment by simply withholding an easy access to the cause. The incurable minority—the actual sots, who live but to drink—may be made comfortable during enforced restraint, if nothing more. Between these two classes lie those curables rapidly tending to become incurable. This is a large and increasing number. In every community there are many who are never entirely free from a craving for strong drink,—men who inherit weak constitutions,—who manage to attend to their occupations with some show of regularity, yet who, as a recent writer has expressed it, acknowledge getting drunk to be their pastime. Let one of this class be thrown from an easily disturbed balance by any of those numerous causes interrupting the routine of this working-day world, and straightway the fate of the inebriate is before him, unless, indeed, enforced restriction be temporarily imposed. The inebriate asylum is designed for the care of all addicted to drunkenness, but more particularly to afford an asylum for the last-mentioned cases. Much credit is due to the founders of such institutions as the Ostiag House, in the island of Skye, and the Binghamton Asylum and "Sanitarium" in this country. They should be honored as the projectors and encouraged as the conductors of valuable yet most delicate enterprises. They stand in need of that kind of support which the action of representative medical bodies can alone give, not only in urging special legislative assistance, but also in removing as far as lies in their power the causes which bring these institutions into existence. Surely such action may be considered in accord with that clause in the Code of Ethics which advises, "Give counsel to the public in relation to matters appertaining to the welfare of the community."

NEW MEAT-PRESERVING PROCESSES.

A NEW preparation of preserved beef, entitled "Condensed Raw Beef (Pulverized)," has recently been left with us. It is a perfectly dry, pulverulent substance, of a brownish hue, and a peculiar, indescribable, but not unpleasant odor. It appears to dissolve readily when placed upon the tongue, and exhibits a pleasant taste, more comparable to that of dried beef than to that of any other substance with which we are familiar.

It is prepared by the National Preserving Company of Baltimore, of beef deprived of its moisture by a new process, which is not described, but by which it is alleged that the solid substance of the flesh is preserved in its natural condition, the albumen being uncoagulated. No seasoning is added in the preparation. It may be administered dry, mingled with bread-crumbs, or spread upon buttered bread, or it may be made into soup. In the former condition, it is thought, it will be available with children, who often refuse to take liquid preparations. If it subserve its purpose,—and whether it will, can be determined only by trial,—it is certainly the most convenient of all the forms of preserved meat which have come under our notice. It is already endorsed by many of the leading practitioners of Baltimore, and we think it deserves a trial at the hands of Philadelphians and others.

The number of the London *Medical Times and Gazette* for July 8, 1871, contains also an editorial notice of a new meat-preserving process, of which one product seems similar to this. Patented by Mr. T. F. Henley, an engineer, the process aims to extract by simple pressure a large portion of the juice from the fibres of meat, and to leave the latter in an available condition as food, if preserved simply by moderate desiccation. The meat-juice, rich in extractive matters and containing over eighty per cent. of albumen, is

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evaporated in vacuum-pans, so as to retain its solubility, flavor, and unchanged alimentary properties. The method relied on is said to be the oldest and safest,—that of extracting moisture at low temperatures; and the mechanical means adopted omit the use of water, great heat, and the coagulation and separation of albuminoid matters.

The apparatus of Mr. Henley is said to be simple, consisting of powerful presses and evaporating-pans, and is open to inspection by visitors.

We regret that no description has been furnished us of the method or apparatus used by the Baltimore Company, but we should judge the processes to be similar. Both furnish the raw material, and in both the meat-fibre appears to be retained, though in comminution.

Certainly no subject is of greater importance than that of preserving meat in such manner as to make it at once efficient, palatable, and therefore applicable under all circumstances.

TRANSACTIONS OF SOCIETIES.

MEDICAL SOCIETY OF WHEELING.

DISCUSSION ON SUDDEN DEATH IN PUERPERAL CASES.

Reported by S. L. Jepson, M.D., Secretary.

At a monthly meeting of the "Medical Society of the City of Wheeling and County of Ohio," West Virginia, Dr. R. H. Cummins, President, in the chair,

Dr. Hupp called the attention of the Society to an interesting case to which he was called the previous night. The patient had been confined five days before, and, sitting up on the day on which he was called, had exposed herself imprudently to a current of air. At 8 P.M. she grew suddenly faint, and her friends were alarmed. On arriving, he found her pulse 90, face pale and anxious, respiration suppressed, surface cold and in a profuse perspiration, and she really appeared in a dangerous condition. She suffered no pain, nor was there any sign of inflammation. He prescribed for the case, and the patient is reported better to-day.

Some years ago the speaker had been called to a case not unlike this one. The woman had been confined, and was doing well, until the third day, when she was suddenly seized with a chill, and died before he could reach the house. He was anxious to know the cause of such sudden prostration and death. Was it embolus, or mere syncope? or can any satisfactory explanation be given?

Dr. Hildreth said sudden deaths of puerperal women were by no means pleasant occurrences to the physician, and all such possessed a peculiar interest. He had met such cases in his own practice. Some years ago he was summoned to see a pregnant woman, and found her in good health, but fearful that she was not going to survive her confinement. He allayed her fears as much as possible, and a week later she was safely delivered of a healthy child. At the time of labor she especially feared hemorrhage, but no abnormal amount occurred. She continued well until the third day, when symptoms similar to those related by Dr. H. occurred suddenly, and death seemed impending. A consulting physician was called, but the patient rapidly sank and died. He had never been fully satisfied as to the cause of her death.

Dr. R. H. Cummins desired to relate the history of a case of sudden death of a puerperal woman, not, however, exactly similar to those already mentioned. The patient, æt. 30, in good health, had been delivered of a fourth child, and convalesced favorably until the fourth week, when symptoms of pleurisy set in, but they were not severe in character. In ten days, with diaphoretics and morphia as the principal treatment, she had so far recovered from pleurisy as to sit up in bed and do some light work, such as cutting out children's clothes. All physical signs of pleurisy had disappeared. She had resolved to leave her bed the next day after doing the above work. About noon, however, when her husband was at dinner below, and only her servant was present, she was suddenly attacked with unfavorable symptoms. Her husband, arriving almost immediately, found her bent forward, and, as he described it, "in a spasm," but probably she was in a fainting-fit. The speaker arrived a few minutes later, and found her bent forward, her head partially covered by a pillow, her countenance pallid and anxious, frothing at the mouth, gasping for breath, pulseless at the wrist, but her heart still beating, and intellect perfectly clear. She gasped, indistinctly, a few words, and in a very few minutes was dead. In this case conditions most favorable for the formation of heart-clot—the puerperal state and pleurisy—were present, and to this cause the speaker attributed the fatal termination.

A *post-mortem* examination was held four hours after death. Recent adhesions were found near the base of the right lung, and slight old adhesions at the apex of the same lung. A small point of this lung, about the size of a turkey's egg, was hepatized. Patches of tubercle, hardened and calcareous, existed in both lungs, but were more abundant in the left.

Dr. C. had reflected much on this case, and in connection with the lung-trouble had asked himself whether the old plan of treatment of pleurisy and pneumonia, viz., bloodletting, general and local blisters, etc., with a view to abort the inflammation, was not after all the best, and productive of the least mortality. Would not accidents such as have been reported to-night be less apt to occur under such treatment, since the longer the inflammation exists, the more fibrinated does the blood become, and hence the greater the liability to clot-formation? He merely suggested these points, without giving any positive opinion on the subject.

Dr. Frissell reported a case of sudden death, somewhat similar to those already given, occurring in an adult female patient convalescing from measles. She had been sitting up, had partaken of a hearty dinner, but towards evening became suddenly unwell. He found her perfectly rational, but with distressed countenance, and fearful of death. She rapidly sank, and died before midnight.

As to the cause of death in these cases, he had generally considered that some sudden congestion of the lungs, or about the heart, played a prominent part. Perhaps by undue exposure to a cool atmosphere, or to a draught of wind, the capillary circulation, already enfeebled by disease, becomes still further interfered with, and the blood is thus driven back about the vital organs of the chest, the circulation becomes much impeded, respiration is consequently interfered with, and death results.

Dr. Reeves remarked that few medical men had been so fortunate as to escape meeting with cases of sudden death in their practice, and especially in the case of patients in the puerperal state. He has had his share of the sad experience. He had often thought it possible that shock had something to do with the result in those cases in which death occurred soon after delivery. One case he remembered well. The patient, whom he was attending in labor, had but a single severe pain, when she collapsed, and was delivered with forceps; she remained pulseless for forty-eight hours, but finally recovered. Another patient, Mrs. S., had been delivered of her fourth child, and convalesced favorably until the ninth day, when, while sitting by the fire nursing her child, a sudden sense of faintness came over her, she fell, and in a few minutes was dead. She had positively *no* bad symptom up to the moment when the faintness seized her.

As to the theory of embolism that is offered as an explanation of these sudden deaths, the speaker would inquire how we are to determine, when making *post-mortem* examinations, the *ante-* from the *post-*mortem clot? Have pathologists established any positive diagnosis between them? Very few autopsies are made in which clots are not found in the heart; but if we are not able to say *when* they have been *formed*, how will they aid us in arriving at the cause of death? As to the comparative value of the older and more modern plans of treatment of pleurisy and other inflammations, he accepted the latter as the better, and thought that statistics would prove

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its superiority. He did not believe the old method gave any security against embolism.

DR. CUMMINS thought that *shock* was out of the question in these cases, and certainly in the one he had detailed. Six weeks had passed since confinement; her convalescence was satisfactory, and convalescence from the pleurisy was also progressing favorably, when death occurred as described. He had arrived at the diagnosis of heart-clot by the process of exclusion. The patient was perfectly rational to the last. Hence no brain-trouble could have been present; the uterus had arrived at the proper stage in the process of involution, and was perfectly healthy in appearance. All the abdominal organs were healthy; the disease of lung was certainly not sufficient to cause death. There was no indication during life of any prior heart-disease, nor was there a history of rheumatism. The symptoms prior to death were such as would be caused by an obstruction of the circulation; and, lastly, a firm clot was found in the heart. Doubtless this clot, or rather a portion of it, passing into the pulmonary artery, cut off the blood from the lungs; and, respiration being thus prevented, death resulted.

DR. HILDRETH said that he had witnessed the autopsy in Dr. C.'s case. He described the post-mortem appearances as already given, with the difference that there was considerable congestion extending from the hepatized portion of the lung. His theory of the cause of death was, that the circulation being already impaired by the tubercular condition of the lungs and the inflammation existing in the right lung, a sudden congestion had probably occurred, and the circulation thus became so much more disturbed that respiration was obstructed and death resulted. Very unfortunately, he added, the contents of the heart and pulmonary artery had been emptied in removing them, and he thought a satisfactory examination was not had; therefore the existence of a clot, other than those so frequently found in the heart, was not well ascertained. He had seen and made many post-mortems, and almost always found clots in the heart.

DR. BATES remarked that a peculiar interest attaches to these sudden deaths of puerperal women; and perhaps under no other circumstances does the death of a patient create so much dissatisfaction with a physician. He used to cease his attendance upon women on the third day after confinement, but of late years was in the habit of watching them for several weeks. So many accidents are liable to occur in this state, that this was necessary if we would insure the safety of our patients. Women were very apt to leave their beds too early, unless watched and cautioned; and no more imprudent act can be committed. By seeing them frequently, and until danger is past, we could impress upon their minds the necessity of great care, and thus lives might be frequently saved. It is the solemn duty of a physician, so long as any danger from these puerperal accidents remains, to watch his patient closely.

As to the cause of death in the case under discussion, the speaker adopted the heart-clot theory, and thought that the symptoms preceding death pointed decidedly to this cause. Congestion is a convenient term, and frequently resorted to; but what are we to understand by it? An accumulation of blood, a stasis. Now, if the circulation had previously in this case been materially interfered with, there might have been congestion; but would the termination have been so sudden? He was by this case reminded of the sudden death of a patient last winter, the cause of which he thought the same, though no autopsy was held. A young man, aged 21, was convalescing favorably from pleuro-pneumonia, when he was seized with violent dyspnœa. His pulse almost ceased; his face became purple, and, throwing himself forward, he gasped for breath, but in vain. All remedies were without effect, and death brought relief in a few hours. Cases such as those reported show plainly the necessity of great care and prudence on the part of the recently delivered woman; and physicians cannot be too vigilant in watching and warning them.

Remarks were made further advocating the theory of congestion, to which Dr. CUMMINS objected decidedly, as applied at least to his case; because—1st. Congestion is greatest *prior to* inflammation. In his case the inflammation was subsiding; and why should a sudden congestion occur at this period? 2d. The autopsy presented no appearance of congestion of the lungs. 3d. Congestion could not have produced death in so speedy a manner. 4th. The symptoms were exactly such as we would expect to find in a case where the circulation was obstructed by an embolus. 5th. The heart did contain a small, firm clot.

DR. HUPP related the treatment and result in two cases of pleurisy, to illustrate the comparative efficacy of the old and new modes of treatment. He was called to a patient with pleurisy eight weeks ago, and prescribed the ordinary treatment of mild counter-irritation, with a diaphoretic and expectorant mixture. The pain, in time, subsided; unfavorable symptoms disappeared, and in a few days the patient went to work, in apparently good health, save a slight cough. The symptoms, however, soon returned, the cough and pain increased, and the patient was compelled to return to his bed. He was then cupped and blistered. The symptoms again soon subsided, and he is now in a fair way to recover.

Since this case was first seen, another similar, but more severe, case had come under the speaker's care. He found the patient, an adult male, suffering with a very severe pain in the chest; respiration and cough were much interfered with. He feared for the patient's safety. Six or eight cups were used on each side of the chest, and blood was freely taken. The pain almost immediately subsided. The next day a very large blister was applied to the chest. He also gave an expectorant and anodyne; and in two days the impending danger was past. A speedy and complete recovery resulted. The speaker thought that if the same energetic measures had been adopted in the first case the relapse would not have occurred. He was in favor of active measures in these cases of sthenic inflammation.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

CORRECTION.

IN the report of the proceedings of the Pathological Society in the last number (21) of the *Medical Times*, it was stated that Dr. John S. Parry exhibited the lungs of a child 2 *years* and 23 *months* old, both of which were the seat of miliary tubercle. It should have read 2 *months* and 23 *days* old, the extreme youth of the child being the point of greatest interest.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By THOMAS HAWKES TANNER, M.D. Revised and enlarged by ALFRED MEADOWS, M.D. 8vo, pp. 550. Philadelphia, Lindsay & Blakiston, 1871.

In this handsome volume of 550 pages one can scarcely recognize the old friend of one's student-days, when the well-balanced differential diagnosis, the categorical array of symptoms, and the "ex cathedrâ" tone in which the appropriate remedy was promulgated, brought comfort to our hearts, and showed us that a correct diagnosis and successful treatment were, after all, but matters of mnemonics. Each symptom succeeded the other in such mathematical sequence, and the diseases had such strong family likenesses, and yet withal such sharp and distinctive individual features, that failure to recognize them was impossible. It was like the "dissected maps" for children, where each piece, however bizarre its form, has its own predestined place, and the curves and angles fit into one another, and correspond so accurately that the "perfect whole" inevitably results. Let, however, by chance an angle be broken off, a piece, however small, be lost, and the child in vain turns and twists the remaining parts; they can never be made to fit, and petulantly it throws away the useless toy. In like manner, when the student, after having carefully committed to memory pages of the manual, finds, at the bedside of the patient, that one of the *expected* symptoms is wanting, a pulse rapid when it should be slow, an eruption papular when it should be vesicular, instead of

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studying the individuality of the case, he vaguely feels sure that "something is wrong," mistrusts his memory, and—turns to Tanner.

In the present edition of Tanner's Manual one cannot read a dozen pages before it is evident that the whole subject is treated in another manner, and that, instead of a collection of unsound aphorisms, we have the result of more careful reading and thorough observation. This change is explained by the preface, which states that the entire work has been carefully revised, and some new chapters added, by Dr. Meadows, already well known as the translator of "Bernutz and Goupil's Treatise on the Diseases of Women," and as the author of several interesting and original articles published in the medical journals, and in the Transactions of the Obstetrical Society. A systematic arrangement of the subject-matter has been introduced, and much that is new and valuable added; but the disadvantages arising from the joint authorship of the book are evident. Contradictory statements can easily be pointed out. For instance, on p. 83, in speaking of the management of the cutaneous eruptions, the author says, "they are best left pretty much to themselves, at all events for a time; we have frequently seen attempts to cure them succeed admirably so far as the eruption, but very badly so far as the effects produced elsewhere, either in the form of convulsions or some other grave disorder;" while on page 86 it is stated that "the *popular* dread of the suppression of cutaneous eruptions giving rise to diseases of the internal organs is founded on the frequency with which metastasis is seen to occur in the diseases of children." While this represents very well the unsettled state of medical opinion on this point, the mind of the student must be somewhat confused as to which view is advocated by the author. In other places the attempt to change and twist the old into a respectable harmony with current theories and beliefs has resulted in but a sorry patch-work. One is reminded of Heine's humorous description of the German summer as, "after all, only a winter half daubed-over green."

Dr. Meadows in his preface especially invites attention to the views which he has advanced as regards diathesis; and hence we are prepared for a frequent invocation to this "deus ex machinâ" to explain obscure points in pathology; but, with all due regard for an author's enthusiasm for a pet theory, we must protest against his inflicting on his reader an absolute verbal repetition of an entire passage, nearly a page in length, when illustrating the importance of considering the diathesis in the treatment of the diseases of children (pp. 111–183).

The author assumes the existence of four diatheses, viz.: the scrofulous, the tuberculous, the rickety, and the syphilitic. "So distinct are these in their external aspects, their physiological characteristics, and their pathological tendencies, that they seldom coexist in the same individual; indeed, some of them have directly antagonistic influences, and cannot operate in the same organism." After this bold and sweeping declaration, we are, we confess, a little surprised to find it stated in the same paragraph that "the syphilitic diathesis may occur with either of the other three," and that "the rickety and strumous seem to have a less distant relationship," while the former "may be, though rarely, combined with tuberculosis." Having made these concessions, however, Dr. Meadows takes heart, and boldly affirms that tuberculosis and scrofula "are not identical, but in many respects *absolutely dissimilar*, and to some extent *even antagonistic*." After the full and free discussion in the London journals and societies of the important advance in pathology which we owe to Virchow, Niemeyer, and Bühl, who have shown that the absorption of scrofulous, cheesy matter is the common and direct cause of tuberculosis, a statement of this kind hardly deserves criticism, the more so because this question, as illustrated by the experiments of Wilson Fox and others, is dismissed with the remark "that even if true it is of interest rather pathologically than clinically," and at all events "does not possess any *practical* importance."

"It is supposed by some," the author says, "that the gray and yellow tubercle merely represent two varieties of the same disease;" and, with a commendable desire "fairly to represent the present state of our knowledge in this department," he adds, "that *more recent* observations *tend rather to confirm this view*."

"Tubercle consists," we learn, "of an exudation of the liquor sanguinis, presenting differences from the inflammatory exudation on the one hand, and the cancerous exudation on the other." Without expecting from a book, whose aim is to be "practically useful to the student," any discussion of advanced views in pathology, are we not justified in insisting that time be not wasted in committing to memory such statements as these?

To make the treatment of meningitis correspond chronologically with the views advanced in pathology, our author advises the treatment recommended by Prof. Gölis, in Vienna, "after great experience," viz.: calomel, the daily inunction of two drachms of mercurial ointment, the head to be kept constantly covered with a flannel cap to prevent all risk of the perspiration being checked,(!) diuretics, and an issue on the neck, or on each shoulder, to be kept open for months." (The second edition of Prof. Gölis' work on Hydrocephalus was published in Vienna in 1820.) In the chapter on renal diseases Dr. Tanner suggests that "if greater attention were paid to this point, it would be found that morbid conditions of the urine, and especially albuminuria, are much more frequent accompaniments of other diseases than are commonly supposed." This subject has lately been thoroughly investigated by Prof. Steiner, of Prague,* who verifies this supposition of Dr. Tanner's by the post-mortem reports of 265 cases of morbus Brightii in children. The other forms of disease affecting the kidneys in childhood are also described at length.

The author speaks of the value of the thermometer in the diagnosis of children's diseases, and rejoices that it is now available in a "cheap and portable form." We cannot forbear to add a word of caution with regard to the use of these instruments, for we have ourselves tested those made in London, and found a difference of two degrees when three of them were exposed to the same temperature. The use of the thermometer in the axilla, as Dr. Tanner advises, presents serious difficulties; for apart from the restlessness of the child, which renders it no easy matter to hold the instrument in place "from eleven to twenty-four minutes, as Dr. Baumler recommends," the respiratory movements alone tend in a few moments to displace the instrument, unless held in position by the observer. The insertion of the bulb of the thermometer in the rectum is, we think, without doubt, the most convenient and reliable method of determining the temperature in children. We regret to see that the observations made by Roget on the temperature of children in health and disease—the fallacies and inaccuracies of which have been made the subject of a sharp critique by Zienissen—are again quoted as authority.

THE CHANGE OF LIFE IN HEALTH AND DISEASE. A Practical Treatise on the Nervous and other Affections incidental to Women at the Decline of Life. By EDW. JOHN TILT, M.D., Senior Physician to the Farringdon General Dispensary and Lying-in Charity, Vice-President of the Obstetrical Society of London, etc. etc. From the third London Edition. 8vo, pp. xviii., 292. Philadelphia, Lindsay & Blakiston, 1871.

Early in life Dr. Tilt was struck by the wise remark of Goethe, "that if a man wants to make his mark, he must set bounds to his work, beyond the limits of which he must not suffer his steps to stray, and work to the uttermost of his power within those appointed bounds." He took to himself the physiology and diseases of women as his field of labor.

Again, when the census was taken in 1861, 1,177,535 women between the ages of 45 and 55 were living in Great Britain and Ireland. This work professes to tell their history, records the probabilities and inevitabilities of their future, and investigates the many diseases by which it may be checkered, based upon the tabulated estimates of the symptoms and of the diseases of five hundred women who were at the change of life, or had passed the menopause.

With such a resolution as the first clause contains, and such material as the second implies, there is required little more than ordinary ability to secure a proper realization of such profession. But we believe Dr. Tilt brings much more than

* Prag. Viert.-jahrschrift, xxvii. p. 79.

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ordinary merit to bear on his subject, and handles it accordingly. No recent researches in physiology or pathology which have any bearing are overlooked by him, and, as a result of his method, a completeness attaches to each of the subjects treated, which greatly increases the value of the work.

It would be impossible, in the space permitted us, to analyze the volume, nor is it necessary, since it has already reached in London a third edition, of which this is a reprint by the American publishers. A mere enumeration of the subjects treated will serve to indicate their importance. They include the physiology of the change of life, principles of pathology of the change of life, principles of treatment at the change of life, principles of hygiene at the change of life, special pathology of the change of life,—including diseases of the ganglionic nervous system, diseases of the brain, neuralgic affections, diseases of the reproductive organs, diseases of the gastro-intestinal organs, diseases of the skin, and other affections occurring at the change of life.

It will be seen that the subjects are of a kind most cursorily if at all elsewhere discussed, and the work therefore contains information nowhere else to be obtained. Few books are issued which are more indispensable to the general practitioner, none of which he will be less likely to regret the purchase.

DACTYLITIS SYPHILITICA; with Observations on Syphilitic Lesions of the Joints. By R. W. TAYLOR, M.D. (Reprinted from *The American Journal of Syphilography and Dermatology.*) Pp. 30. New York, F. W. Christern, 1871.

The author describes a case of inflammation of the flexor sheath and connective tissues of the second toe of the right foot, occurring in a syphilitic subject in the third year after infection. Other cases of a similar character, narrated by Nélaton, Lüche, Berg, and others, are given, and a résumé presenting our knowledge of the subject added. Dr. Taylor divides the cases into two classes: "(1), where the subcutaneous connective tissue, as well as the fibrous structures of the articulations and the phalanges, is involved; (2), where the morbid processes begin in the periosteum and bones, and secondarily implicate the joints, and may or may not be accompanied by deposit in the subcutaneous connective tissue."

It occurs to us that, while Dr. T.'s cases and those collected by him are interesting, he has subjected himself to the charge of prolixity in spreading out his comments over fifteen pages.

FOOD FOR INFANTS. By HIRAM CORSON, M.D. Pamphlet, 8vo, pp. 14. (Reprinted from the *Northwestern Medical and Surgical Journal.*) St. Paul, Pioneer Printing Company, 1870.

It is said that Sheridan once astonished some friends at a dinner-party by inquiring whether they intended to drink like brutes or like men. "Like men, of course!" was the indignant reply. "Then," said he, "we shall all be jolly drunk, for brutes never drink more than they want." Dr. Hiram Corson, recognizing the fact that babies live an essentially animal life, is an advocate for giving them the largest amount of nourishment that they will take, maintaining his position by the forcible argument that the sensations of the child, and not the fancies of others, are the best index of its needs. Overfeeding, indeed, is something which is oftener read of than seen, and the stomachs of infants especially will not be coerced into submission while they possess a safety-valve in the shape of an œsophagus. But this doctrine, which is usually accepted in regard to the quantity, is not so generally recognized as to the quality, of food.

Here again we must be guided by observation, remembering that the object to be attained is the perfect nutrition of our little patient. If it thrives upon one-third milk and two-thirds water, there is no advantage in changing the diet; but if, on the contrary, those symptoms of malnutrition with which every physician is familiar present themselves, it is evident that its food should be rendered more nourishing. We are indebted to Dr. Corson for the demonstration of the practical utility of beginning our trials with pure cow's milk, since the only inconvenience which is found to occur is the regurgitation of a part of it, while, on the other hand, the infant runs the risk of starvation, or at least of numerous diseases, before any notice is taken of the deficiently nutritious quality of milk and water. If he succeeds in his object "of directing attention to the fact that many thousands of the children who annually die prematurely die from want of food," he will have accomplished a great work; but if he proposes to give all children pure cow's milk without reference to its agreement or disagreement with their stomachs, he will have fallen into the same error with those who confide exclusively in milk and water.

As an earnest appeal to mothers, this essay deserves a careful reading; as a contribution to Social Science, it is no less valuable.

AFFECTIONS OF THE THROAT AND LARYNX. The Classification, Description, and Statistics of 150 Cases, occurring in the Throat Department of St. Mary's Hospital. By ARTHUR TREHERN NORTON, F.R.C.S., Assistant Surgeon, and Surgeon in Charge of the Throat Department of St. Mary's Hospital; Lecturer on Anatomy in the Medical School. 8vo, pp. 39. London, Robert Hardwicke, 1871.

This is an admirably-printed octavo volume of thirty-nine pages, containing clinical histories of a number of cases of throat-affections treated at the above-named hospital by Drs. Norton and Sieveking, giving examples of nearly all the ordinary diseases of the pharynx and larynx, and written in a plain and very condensed style. The work is a reprint of Papers on Diseases of the Throat and Larynx, which appeared in the London *Lancet* in 1870. It opens with the "Mode of Applying the Laryngoscope," and recommends the use of the perforated mirror, held in position before the eye of the operator by a spectacle-attachment; and for fixing the tongue, its forcible drawing forward, enveloped in a napkin, by the left hand, the index-finger being interposed to prevent its being injured by the teeth of the patient.

The cases are collected into classes and subdivisions, by which reference to them is much facilitated, and the author has been enabled to condense them very materially, at the same time recording their general characteristics and therapeutical treatment without a tedious repetition of details. Thirty-eight of the patients were tainted with syphilis, thus complicating their diseases and rendering the cure more tedious. The remaining one hundred and twelve belong, with few exceptions, to the general run of throat-affections met with in the daily routine of private practice, and are valuable for ready reference, especially as they have not been selected for publication and do not lay claim to any extraordinary character or results.

In the laryngeal cases, direct topical application by the physician appears to have been made in most instances, the favorite remedies being strong solutions of nitrate of silver and chloride of zinc. Inhalations of creasote and tincture of iodine were directed, but atomization was very seldom used, possibly owing to the greater difficulty of using the necessary instrument, as compared with the common inhaler, in the class of patients treated.

We cordially recommend Dr. Norton's treatise to all physicians desiring to accomplish, by simple means, the cure of those affections of the throat which, within a few years, have been opened to our eyes and brought to a better understanding by means of the laryngoscope.

BOOKS AND PAMPHLETS RECEIVED.

The Antiseptic System: A Treatise on Carbolic Acid and its Compounds; with Inquiries into the Germ-Theories of Fermentation, Putrefaction, and Infection; the Theory and Practice of Disinfection; and the Practical Application of Antiseptics, especially in Medicine and Surgery. By Arthur Ernest Sansom, M.D., London. With Nine Page-Plates. 8vo, pp. xi., 356. Philadelphia, J. B. Lippincott & Co., 1871.

Annual Circular and Catalogue of the Washington University, Medical Department, Baltimore, Md., 1871.

Twenty-Ninth Annual Announcement of Rush Medical College, Chicago, Ill., for the Session of 1871–72, with a Catalogue of the Students of Previous Session and Graduates from Organization of Institution.

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GLEANINGS FROM OUR EXCHANGES.

SPONTANEOUS GENERATION.—Prof. Tyndall (*The Doctor*, July 1, 1871) delivered during the month of June an interesting lecture at the Royal Institution, in which he dealt as follows with the problem that has lately excited renewed attention:

"As regards the lowest forms of life, the world is divided, and has for a long time been divided, into two parties, the one affirming that you have only to submit absolutely dead matter to certain physical conditions to evolve from it living things; the others, without wishing to set bounds to the power of matter, affirming that in our day no life has ever been found to arise independently of pre-existing life. Many of you are aware that I belong to the party which claims life as a derivative of life. The question has two factors: the evidence, and the mind that judges of the evidence; and you will not forget that it may be purely a mental set or bias on my part that causes me throughout this discussion, from beginning to end, to see on the one side dubious facts and defective logic, and on the other side firm reasoning and a knowledge of what rigid experimental inquiry demands. But, judged of practically, what, again, has the question of Spontaneous Generation to do with us? Let us see. There are numerous diseases of men and animals that are demonstrably the products of parasitic life, and such disease may take the most terrible epidemic forms, as in the case of the silkworms of France in our day. Now, it is in the highest degree important to know whether the parasites in question are spontaneously developed, or are wafted from without to those afflicted with the disease. The means of prevention, if not of cure, would be widely different in the two cases.

"But this is by no means all. Besides these universally admitted cases, there is the broad theory now broached and daily growing in strength and clearness,—daily, indeed, gaining more and more of assent from the most successful workers and profound thinkers of the medical profession itself,—the theory, namely, that contagious diseases generally are of this parasitic character. If I had heard or read anything since to cause me to regret having introduced this theory to your notice more than a year ago, I should here frankly express that regret. I would renounce in your presence whatever leaning towards the germ-theory my words might then have betrayed. Let me state in two sentences the grounds on which the supporters of the theory rely. From their respective viruses you may plant typhoid fever, scarlatina, or smallpox. What is the crop that arises from this husbandry? As surely as a thistle rises from a thistle-seed, as surely as the fig comes from the fig, the grape from the grape, the thorn from the thorn, so surely does the typhoid virus increase and multiply into typhoid fever, the scarlatina virus into scarlatina, the smallpox virus into smallpox. What is the conclusion that suggests itself here? It is this: That the thing which we vaguely call a virus is to all intents and purposes a *seed;* that in the whole range of chemical science you cannot point to an action which illustrates this perfect parallelism with the phenomena of life,—this demonstrated power of self-multiplication and reproduction. There is, therefore, no hypothesis to account for the phenomena but that which refers them to parasitic life.

"And here you see the bearing of the doctrine of Spontaneous Generation upon the question. For if the doctrine continues to be discredited as it has hitherto been, it will follow that the epidemics which spread havoc among us from time to time are not spontaneously generated, but that they arise from an ancestral stock whose *habitat* is the human body itself. It is not on bad air or foul drains that the attention of the physician will primarily be fixed, but upon disease-germs which no bad air or foul drains can create, but which may be pushed by foul air into virulent energy of reproduction. You may think I am treading on dangerous ground,—that I am putting forth views that may interfere with salutary practice. No such thing. If you wish to learn the impotence of medical science and practice in dealing with contagious diseases, you have only to refer to a recent Harveian Oration by Dr. Gull. Such diseases defy the physician. They must burn themselves out. And, indeed, this, though I do not specially insist upon it, would favor the idea of their vital origin. For if the seeds of contagious disease be themselves living things, it will be difficult to destroy either them or their progeny without involving their living *habitat* in the same destruction."

CARBOLIZED ATMOSPHERE IN THE TREATMENT OF BLOOD-POISONING.—In the London *Practitioner* for January, Dr. John Wood commends very strongly a new method of using carbolic acid, and reports two cases of severe traumatic erysipelas and one of pyæmia, in which he thinks recovery was largely attributable to the method of employment. To the cradle for keeping the bedclothes off the affected part, and to various projecting portions of the bed, he hangs little muslin bags containing a powder saturated with carbolic acid. In this way he saturates the atmosphere about the patient and the wound with the vapor of carbolic acid, and produces constitutional effects without disturbing digestion. In the pyæmic case the breath and urine were very strongly impregnated with the acid, and the latter for a week had the characteristic slate-colored film and deposit. This deposit was analyzed, and found to be identical with blue indigo, and, therefore, was probably formed by a transformation of the yellow indigo of the excretion. The pyæmia followed a wound of the right hand. The case was remarkable for the complete and rapid recovery of the patient, with a stiff knee-joint, after the total necrosis and removal of the patella through a free opening for the evacuation of the pyæmic abscess of the joint.

NASO-PHARYNGEAL POLYPUS.—Mr. Cooper Forster (*Lancet*, May 20, 1871) reported the following case to the Clinical Society of London. The patient was nineteen years of age, and had a large growth filling up the left nostril, firm, fleshy, and fibrous, and covered with mucous membrane. The right nostril was not much interfered with; there was no swelling of the face or fulness of the palate, nor any projection in the throat. Chloroform was given, and a wire snare put round the growth, which broke off, and bled profusely. Mr. Forster then made a further examination, and, having passed his finger up the nostril, found an enormous growth, which could not be circumscribed, but large portions of which he tore away with forceps. Four days after the operation, the patient suddenly became unconscious. The right half of his face was numb, and, though he rallied, he was never able to speak except to say "too-too." The temperature rose to 102° F. He had three convulsive fits on the seventh day, and became totally unconscious, and died twelve days after the operation. The post-mortem examination showed general arachnitis, and sloughing of the brain about Broca's convolution. That portion of the growth which had not been removed occupied the left side of the external base of the skull, and filled the space between the greater and lesser wings of the sphenoid, the orbital plate of the frontal, and the cribriform plate of the ethmoid bone. It had extended from the nasal fossa by way of the sphenoidal fissure into the back of the orbit, but without damaging the optic nerve. The cribriform plate of the ethmoid was broken; and at the back part there was a small opening about a quarter of an inch in diameter, and a fracture extending forward from the opening. Microscopic examination showed the growth to consist of small fusiform cells and stellate connective tissue.

DETERIORATION OF MILK IN FEEDING-BOTTLES.—Prof. Gunning (*Med. Times and Gaz.*, May 6, 1871), the Government Analyst at Amsterdam, writes, "I object to the infants' feeding-bottles in all instances where any part of them is composed of caoutchouc or india-rubber, or any like material. There is nothing so ill suited to the constitution of the human body as the material in question. When, in consequence of suction, the pores of the caoutchouc are enlarged, some portion of the milk always remains behind in them, which cannot, or at least cannot without great difficulty, be removed. This milk quickly becomes bad, and spoils the fresh milk with which it comes in contact. The caoutchouc material in question is made up of several ingredients. White zinc, or white lead, is very commonly employed, which is very poisonous. My objections are not founded exclusively upon *a priori* conclusions. In this country many fatal cases have happened among infants, which on solid grounds may be ascribed to the use of these bottles."

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TREATMENT OF GONORRHŒA.—Mr. Berkley Hill (*Lancet*, April 29, 1871) speaks favorably of the jelly of copaiba in the treatment of the sub-acute form of this disease. This preparation is almost as firm as calf's-foot jelly, very attractive to the eye by its rosy red color, and not repulsive to the palate, its flavor being masked with peppermint. As it contains seventy-five per cent of copaiba, large quantities can be taken in a small bulk. If a piece as large as a filbert be rolled in wafer paper, it can be swallowed without being tasted at all. The after-effects of nausea, diarrhœa, etc. are not more frequent than from other forms of copaiba, if indeed they be as common. Mr. Hill speaks favorably of the oil of sandal-wood, but does not think it superior to copaiba. The following formula of Henderson is recommended in conditions not permitting the use of copaiba. Oil of sandal-wood, one ounce; rectified spirits of wine, two ounces; oil of cinnamon, twenty-five minims. Dose, one or two drachms three times a day.

GUNSHOT WOUND OF THE AXILLA WITHOUT INJURY OF THE AXILLARY ARTERY.—M. Bonnafont reports in the *Comptes Rendus* (*Centralblatt*, May 20, 1871) two cases of gunshot wound in which the axillary artery was uninjured, the veins and nerves being, however, very much lacerated. The immunity of the arteries is to be ascribed partly to the cellular and elastic structure of their coats, but principally to their cylindrical form.

IODIDE OF POTASSIUM AND SUBNITRATE OF BISMUTH.—In the *British Medical Journal*, Drs. Woodman and Tidy state some alarm was caused by the formation of a red precipitate in a mixture containing subnitrate of bismuth and iodide of potassium. The precipitate formed not at once, but slowly, was in cubic grains, and is said to have been a protiodide of bismuth. This iodide is extremely insoluble, and was tried by itself in doses of from five to twenty grains, but did not appear to have any therapeutic power.

ON ULCERATION OF THE FRÆNUM LINGUÆ IN PERTUSSIS.—Dr. Maccalls asks attention (*Glasgow Med. Jour.*, March) to the frequency with which a peculiar ulceration on or near the frænum of the tongue occurs in children suffering from hooping-cough. Thus, in two hundred and fifty-two children suffering from pertussis, it was found to exist in one hundred and eleven, or about forty-four per cent. The affection varied in degree from a mere abrasion—often of a whitish appearance, which usually formed its first stage—to a deep fissure with a gray or yellowish surface, and often bleeding during or after a paroxysm. In some cases it began as a vesicle instead of an abrasion. In the great majority of cases (*i.e.* in 105 out of the 111) it was situated on the front of the frænum, and its presence in another situation was usually associated with some irregularity of the teeth. The affection generally appears some time during the second week. Dr. M. is disposed to think that it is due to mechanical causes, and is not, as has been maintained by some, a specific eruption; and this view is borne out by the fact that it never appears before dentition. He is inclined to attribute to its presence diagnostic importance, as he has never found it in other diseases than pertussis.

A BULLET REMAINS IN THE BRAIN NINETEEN AND A HALF YEARS.—The *Journal of Psychological Medicine*, July, 1871, contains the following, which is taken originally from an Italian journal:

"Joseph Soler, a lawyer in Venice, was shot in a duel, June 16, 1850. The ball entered the head above the right ear. Prof. Cortesi saw the wound five hours afterwards. The patient was bled, and cold water was applied to the wound. On the 31st of August he was deemed convalescent. For a considerable time his memory was weak, and vision was somewhat disturbed. In time, however, these two disturbances disappeared; his mind became as clear and his judgment as good as ever. He now complained of nothing but a painful sensation in the back and in the lower extremities, especially in the right, which became more acute when he coughed, sneezed, etc., and extended to the head. He died of pneumonia, December 7, 1869. The autopsy displayed a funnel-shaped cicatrix above the right ear, and a notable thickening of the skull. On the petrous portion of the temporal bone, and on the border of the tentorium, a dark body was found, which consisted of two pieces of lead, separated from each other by a splinter of bone. On raising the cerebellum, the finger could be thrust into a canal, which was in the brain-substance. At the end of this canal, which was ten centimetres in length and ran horizontally, another rough body was found, which proved to be a piece of bone two centimetres in length."

SESQUICHLORIDE OF IRON AND GLYCERINE IN DIPHTHERIA AND CROUPOUS AFFECTIONS.—Prof. Clar (*Practitioner*, July 1, 1871, from the *Wien. Medizin. Zeitung*, No. 19, 1871), having experienced the advantages from the application of the best anhydrous glycerine (of Sarg) in various catarrhal and slight croupous and diphtheritic affections, met with some of a much more severe type, which led him to add the sesquichloride of iron to the glycerine with excellent results. The method of treatment he adopts, varying of course with individual peculiarities, is the following: He first prescribes a gentle aperient, either in the form of a manna draught, or of a few grains of calomel, which last he holds to be a powerful antiphlogistic remedy, and, when properly used, of great value. Coincidently he directs cold compresses or cloths to the neck and head, or even to the chest, carefully renovated in accordance with the elevation or depression of the temperature, cold or iced water being at the same time given as a drink; and then commences at once the use of iron-glycerine, which consists of two ounces of anhydrous glycerine and twenty drops of the liquor ferri sesquichloridi. Of this mixture half a teaspoonful is to be given every half-hour throughout the day and night. As soon as the symptoms appear to be mitigated, the quantity is diminished to a teaspoonful every second hour; and in the intermediate period, with the object of dissolving the exudate, a mixture composed of glycerine, two ounces, borax, twenty grains, is similarly given by a teaspoonful at a time. The iron-glycerine is progressively given at longer periods, and is gradually replaced by the borax-glycerine.

LARDACEOUS DISEASE.—A committee of the Pathological Society of London (*Lancet*, May 20, 1871) has reported to that society that the affected organs in lardaceous disease are greatly deficient in salts of potash, while they contain an increase of chloride of sodium and cholesterine. The formation was shown to be nitrogenous, and to have a relationship to a solution of fibrin in hydrochloric acid. This report confirms some observations of Dr. Dickinson, which were published in the Transactions of the Medico-Chirurgical Society. The committee prefer the name lardaceous disease to any other which has been proposed for this affection.

TRANSVERSE STRIATION OF MUSCLE.—In *The Academy*, vol. i. pp. 76 and 156, is contained an account of the structure of striate muscle, by M. Hensen, and a critique upon his views, by M. Krause. In the number of that journal for April 15 of this year M. Krause is again quoted from *Zeitschrift für Biologie*, Band vi., Heft 4, where he maintains that Hensen has confused three separate and distinct things under the name "median disk:" 1. The true transverse lines as seen with accurate focusing in the invertebrata. 2. In the higher vertebrata, with accurate focusing and oblique illumination, he has mistaken for the true transverse lines the shadow thrown by the border of the anisotropal substance. 3. In the lower vertebrata, with too high focusing, he has mistaken for transverse lines the dark line which is the expression of the high refractive power of the anisotropal substance.

SPONTANEOUS INVERSION OF UTERUS.—Dr. J. H. Tylecote (*Brit. Med. Jour.*, January 28, 1871, p. 84) reports that a young married woman was delivered by a physician of her first child. The labor was natural, but followed by profuse atonic hemorrhage. Twenty-four hours after, he was sent for, and found that a complete inversion of the uterus had followed a sudden accession of powerful expulsive pains. There was no hemorrhage, but the patient was prostrated, anæmic from previous loss of blood, and had a rapid, feeble pulse. Chloroform was given, the inverted uterus grasped with the right hand, introduced within the vagina, and pushed upwards until the vagina was put on the stretch. The reduction took place without any perceptible jerk, and the patient made a good recovery.

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MISCELLANY.

PRIZES ANNOUNCED. *Fiske Medical Prize Questions.*—The Trustees of the Fiske Fund, consisting ex officio of G. L. Collins, M.D., President, Lloyd Morton, M.D., first Vice-President, and F. H. Peckham, M.D., second Vice-President of the Rhode Island Medical Society, propose the following subjects for 1872:

1. Hydrate of Chloral: its Physiological Effect and Therapeutical Uses.

2. Condurango: its History and Medical Properties.

To the author of a dissertation considered worthy of a prize, upon the first subject, they offer $100, and upon the second, $200.

A competitor for either of these prizes must forward to S. Aug. Arnold, M.D., Providence, R.I., on or before the first day of May, 1872, free of expense and in a legible handwriting, a copy of his dissertation, with a device or motto thereupon, and also accompanying it a sealed packet, having the same device or motto inscribed upon the outside, and his name and place of residence within.

Previous to receiving the premium awarded, the author of the successful dissertation must transfer to the trustees all his right, title, and interest in the same, for the use, benefit, and behoof of the Fiske fund. The usual regulations are in force in regard to the return of unsuccessful dissertations to the author without the discovery of his name.

Harvard University. Boylston Medical Prize Questions.

The Boylston Medical Committee, appointed by the President and Fellows of Harvard University, announce that the following questions are proposed for 1872:

1. The Pathology of the Malignant and Semi-Malignant Growths.

The author of a dissertation on this subject, considered worthy of a prize, will be entitled to a premium of $200.

2. The Pathology and Treatment of Sunstroke.

The author of a dissertation on this subject, considered worthy of a prize, will be entitled to a premium of $150.

Dissertations on these subjects must be transmitted, postpaid, to John Jeffries, M.D., Boston, *on or before the first Wednesday in April*, 1872.

The following questions are proposed for 1873:

1. Electro-therapeutics.

2. The Value of Chemistry to the Medical Practitioner.

The author of a dissertation considered worthy of a prize on either of the subjects proposed for 1873, will be entitled to a premium of $150.

Dissertations on these subjects must be transmitted as above, on or before the first Wednesday in April, 1873.

Further information may be obtained from the Secretary, or from a more detailed advertisement in the *Boston Medical and Surgical Journal* of June 15, 1871.

Warren Triennial Prize.—The next Warren Prize will be awarded for the best Essay, considered worthy of a prize, on the subject of "Experimental Researches on the Elimination of Drugs by the Mammary Glands."

Each Essay should be accompanied with a sealed envelope containing the author's name and address, and be transmitted to Benjamin S. Shaw, M.D., Resident Physician, Massachusetts General Hospital, on or before January 1, 1874.

THE RECENT BOILER-EXPLOSION AT NEW YORK.—The examination into the cause of this accident has proceeded sufficiently far to show that the boiler of the steamer Westfield was unfit for use, and that the accident was therefore the result of negligence. Present legal enactments having proved ineffectual in preventing such indifference, we question whether any additional legislation will be so effectual as that suggested by a select committee of the House of Commons, recently appointed to consider this same subject. We learn from the London *Lancet* for July 8, 1871, that the committee, believing that the great majority of explosions arise from negligence, recommend that full responsibility for personal damages shall in every case rest upon the owner, and shall only be rebutted by proof that the accident arose from causes beyond his control. We believe, with the *Lancet*, that there can be little doubt that such a liability would strike at the root of the parsimony which lies at the bottom of these explosions, and which is the real cause, therefore, of the loss of so many valuable lives in these instances.

THE MORDAUNT CASE.—The unhappy Lady Mordaunt, after having resided for some months in a private insane-asylum, has finally been discharged from legal custody, and has been reported as a case of feigned insanity to the Commissioners of Lunacy. She has been removed to the custody of her father, Sir Thomas Moncrief, while Sir Charles Mordaunt, it is said, will reinstitute proceedings for obtaining a divorce.

GEOGRAPHICAL MAP OF MATERIA MEDICA.—M. Leon Soubeiran has drawn up such a map, the medicinal substances being marked on the very geographical spots whence they are obtained. Below the map an alphabetical index of the substances gives the corresponding countries. The London *Lancet* of July 8, from which we derive this piece of information, says that M. Soubeiran took the idea from Mr. George Barber, of Liverpool, but has produced, according to M. Chatin, the reporter to the Academy of Medicine, a much more important work. These maps have only been drawn up; it is hoped that they will be engraved, as they will certainly prove useful aids to the memory.

THE PRODUCTION OF OPIUM IN TENNESSEE.—We learn from the *Nashville Union* that the poppy-plant has been successfully cultivated in the interior of the State of Tennessee, and that a great deal of interest in the subject of its cultivation has been manifested, not only by scientific men, but also by the general public. It is believed that the climate of Tennessee is well suited for the growth of the plant, and up to this time the yield of opium has been large, one gentleman obtaining as much as from thirty to fifty pounds per acre. One laborer can easily cultivate four acres.

HONORS AND APPOINTMENTS.—Dr. Frerichs, of Berlin, well known through his great work on the Liver, has had conferred upon him the order of the Iron Crown.

Dr. Silver has been appointed to succeed Dr. Hyde Salter, of Charing Cross Hospital, London, that gentleman having resigned on account of ill health.

Mr. James Paget, F.R.S., having resigned his position of Senior Consulting Surgeon to St. Bartholomew's Hospital, has been appointed Honorary Consulting Surgeon. The resolution embodying an expression of sincere regret on the part of the General Court of Governors, at his resignation, was written upon vellum, magnificently framed, and bore the signature of the Prince of Wales as President of the Hospital, in the presence of whom and the Princess of Wales, the

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Marquis of Lorne, and Princess Louise, the presentation was made.

Dr. F. T. Roberts has been appointed Assistant Teacher of Clinical Medicine at University College Hospital, London, and Mr. Berkley Hill and Mr. Christopher Heath have been promoted from the office of Assistant Surgeon to that of Surgeon.

MORTALITY AMONG GERMAN MILITARY SURGEONS.—An official report (*Med. Times and Gaz.*, July 1, 1871) states the German loss of military surgeons to have been 101,—viz., 72 killed in battle, 25 died of disease, and the rest by accidents. The loss is considered very slight when compared with other campaigns, especially in the Crimean war.

MR. GROTE, THE HISTORIAN.—At his request (*Med. Times and Gaz.*, July 8, 1871) the skull of the late Mr. Grote has been opened by Mr. Marshall, who has taken a cast of the brain. The President's Chair at University College, vacant by the death of Mr. Grote, is to be filled by Lord Belper.

The historian also bequeathed his valuable library to the London University.

KING'S COLLEGE, LONDON.—The donations at the recent annual dinner at King's College amounted to £4500, or more than $22,500.

THE FEMALE STUDENTS AT EDINBURGH.—The female aspirants for medical honors appear to be as irrepressible at Edinburgh as here. Led on by that redoubtable lady with the unharmonious name, Miss Jex Blake, they have again been knocking at the door of the University and demanding further privileges. It appears, according to the *Lancet*, that some of the professors are not prepared to deliver second courses of lectures for the ladies' benefit, while the University regulations do not admit of the ladies attending more than four classes at the extra-academical school. Miss Jex Blake accordingly suggests that the Senatus might appoint special lecturers in cases where the ordinary lecturer declines to give a second course, and that the expenses of such appointment should be defrayed by the ladies themselves, or, failing that arrangement, that the extra-academical course should be allowed to qualify for graduation beyond the four classes already allowed for that purpose by the University. As the *Lancet* admits, the proposal seems quite a reasonable one, and if the Senatus should reject it, that body will certainly be in the scarcely consistent position of having first allowed Miss Jex Blake and her sisterhood to matriculate as cives of the University, to enrol themselves as students, to prosecute their studies with a view to graduation, and then having turned round and barred their progress half-way.

Apropos of the above, the English medical journals for July 22 announce that on July 18 the Lecturers at Surgeons' Hall, Edinburgh, resolved, by a majority, to rescind the resolution adopted last year, permitting lectures to be delivered to female as well as male students. The lecturers are therefore prohibited from giving instruction to female students.

MYSTERY SOLVED.—Many of our readers will remember the young woman afflicted by the companionship of a snake, which played bo-peep from her throat. Although "*plainly seen*" by several of our physicians, who lay in wait for the reptile, forceps in hand, it always escaped capture. The following slip, taken from the *Tribune*, solves the mystery, and at the same time suggests a new anthelmintic, which, we feel assured, will always expel such parasites:

"Annie Brown for years excited rural communities by exhibiting an unusual cause of affliction, and has been given over by many doctors as one beyond cure. She has apparently been troubled with a snake which, at intervals, thrust its head out of her mouth and instantly retreated down her throat. A suspicious physician in Wayne County Infirmary prepared for sharp work the other morning, and, when the snake appeared, seized the poor woman by the neck, so that the reptile might not retreat. Lo, when disgorged, nothing more formidable than an india-rubber imitation of a snake came forth, and now Annie's occupation is gone."

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	July 22.	July 29.	Aug. 5.
Abscess	0	1	0
Consumption	44	44	40
Other Diseases of Respiratory Organs	12	23	14
Diseases of Organs of Circulation	13	20	12
Diseases of Brain and Nervous System	63	50	77
Diseases of Abdominal Organs	140	116	87
Gunshot Wound	0	1	0
Fracture of Skull	0	0	1
Zymotic Diseases	22	19	12
Debility	28	31	26
Intemperance	0	0	1
Casualties	17	5	4
Cancer	4	6	3
Gangrene	0	1	2
Sunstroke	2	2	0
Marasmus	25	26	24
Malformation	0	2	0
Old Age	11	12	10
Poisoning	0	2	0
Stillborn	22	17	10
Scrofula	0	2	2
Puerperal Convulsions	0	0	2
Suicide	0	2	1
Syphilis	1	0	0
Tetanus	1	0	3
Drowned	0	3	5
Unclassifiable	15	11	12
Unknown	1	0	0
Totals	421	396	348
Adults	132	146	128
Minors	289	250	220

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 19, 1871, TO AUGUST 4, 1871, INCLUSIVE.

MILLER, GEO McC., ASSISTANT-SURGEON.—By S. O. 154, Headquarters Department of the South, July 20, 1871, to proceed with command from Montgomery, Ala., to Atlanta, Ga., and report thence by letter to these Headquarters.

CRONKHITE, HENRY M., ASSISTANT-SURGEON.—By S. O. 278, C.S., War Department, A. G. O., relieved from duty in Department of Texas, to proceed to New York City, and, upon arrival there, report by letter to the Surgeon-General.

POPE, B F., ASSISTANT-SURGEON.—By S. O. 293, War Department, A. G. O., July 29, 1871, to report to the Commanding-General Department of the South for assignment to duty.

WILSON, WM. J., ASSISTANT-SURGEON.—By S. O. 278, War Department, A G. O., July 18, 1871, relieved from duty in Department of Texas, to proceed to New York City, and, upon arrival there, report by letter to the Surgeon-General.

HALL, JOHN D., ASSISTANT-SURGEON.—By S. O. 187, Headquarters Department of Dakota, July 14, 1871, upon being relieved by A. A. Surg. McChesney at Cheyenne Agency, D.T., to proceed to Fort Shaw, M.T., for duty as Post-Surgeon.

HARVEY, P. F., ASSISTANT-SURGEON.—By S. O. 144, Headquarters Department of Texas, July 14, 1871, assigned to duty as Post-Surgeon at Fort Quitman, Texas; and by S. O. 145, C. S., Department of Texas, granted leave of absence for thirty days, with permission to leave the limits of the department.

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FRIDAY, SEPTEMBER 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON INTERMITTENT HÆMATURIA.

BY JAMES TYSON, M.D.,

Clinical Lecturer on Microscopy and Urinary Chemistry in the University of Pennsylvania; one of the physicians to St. Joseph's Hospital, etc.

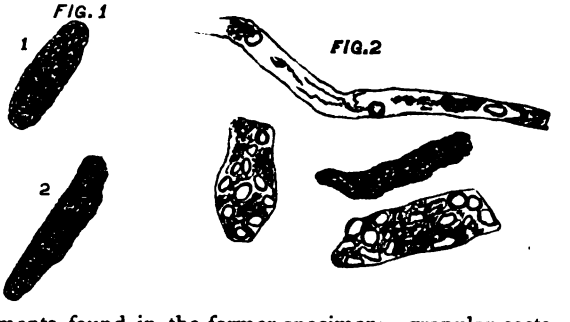
THE patient I present to you to-day, gentlemen, illustrates a class of diseases of which it may be truthfully said the real nature is, as yet, unknown. The term "Intermittent Hæmaturia" is one which has been applied to at least three sets of symptoms, of which the most characteristic is the intermittent discharge of a blood-colored urine; the term *blood-colored*, rather than bloody, being here used designedly, for reasons which will subsequently appear.

The set of cases, of which the present is a representative one, are not unvarying in their symptoms; but that before you is sufficiently typical, and I will, therefore, read the history as obtained.

E. P., aged 34, a bricklayer, has lived in the rear of 1110 Ohio Street, in a densely-built portion of the city, since 1859,—a period, therefore, of about twelve years. He never had anything like "chills" before his present illness, and, except having occasionally worked in the vicinity of the more open parts of the city, known as "the lots," where there is always more or less standing water, he has not been exposed to malarial influences. On the 8th of October, 1870, he was laying brick at Fourth and Willing's Alley, one of the oldest and most densely-peopled portions of the city, when, having occasion to pass his water, he noticed that it was "bloody." There was no preceding chill; but immediately after this act of micturition, he was seized with violent pain in the umbilical and lumbar regions. He was carried to his home, where the pain was relieved at the end of an hour by a hypodermic injection of a salt of morphia. His urine continued "bloody" for twenty-four hours, after which it became natural in appearance. He returned to his work in three days after the attack, but a few days later had a second, *preceded*, in this instance, by a *marked chill*, and followed as before by the pain, which is described as being very severe. He recovered, and again went to work, but again had a chill, bloodlike urine, and pain. He thus had five similar attacks between the 8th and 26th of October, but is unable, at present, to recall any periodicity in their occurrence. Succeeding the chill, and during the pain, he had, in each instance, a profuse "sweat;" but, except a slight feeling of warmth, with regard to which he is by no means certain, there is no history of a febrile movement. After the 26th of October, the chill, and bloodlike urine, presented themselves on an average once a week, to March 24. They were not followed as before by pain, until the recent attack about to be described. The sweats also ceased with the disappearance of the pain, to which, indeed, it seems not impossible to attribute them, since we know it is not unusual for paroxysms of pain to be attended by profuse sweating; no peculiar import, therefore, can be assigned them.

On Thursday, March 23, he presented himself with a bottle of urine, which was normal in color, without deposit, without albumen, and without any morphological element discoverable by careful microscopic examination. On the evening of the next day, he brought to me six ounces of urine just passed, and presenting the characters of the specimen before you,—of an opaque, dark-brown, almost black color when in bulk, and of a bright cherry-red in thin layer. On standing, it deposited a moderate amount of dark reddish-brown, apparently pulverulent sediment. The odor was only faintly urinous, reaction neutral, and sp. gr. 1020. There was in response to the usual tests a supernatant collection, rather than a deposit, of albumen, which occupied nearly one-half of the bulk of the fluid tested. Most interesting, however, were the results of the microscopic examination. *Not a single blood-corpuscle* could be detected, after the most careful search. There was, however, a great abundance of amorphous granular pigment, which, in aggregation, presented a dark-red color, and which did not disappear on the application of heat; also numerous granular casts, filled to various degrees with the granular element alluded to, as seen in the specimen under the class microscope, as well as the drawing which I pass around. (*Fig.* 1.) There were, also, pigment-flakes of a dark-red color, small granular cells, and epithelium. There were few urates. This attack was preceded by a chill, with a recurrence of the subsequent violent pain, which had been long absent.

On March 27, A.M., the urine was again clear, but at 4 P.M. of this day he had a slight chill, followed by the bloodlike urine which I here show you, and presenting the same characters as that described. Let us now study it in your presence. Note the dark-brown, almost black color when in bulk, and the evident cherry-red when in thin layer. The odor is more distinctly urinous than that of the first specimen. Its reaction, you perceive, is barely acid; its specific gravity is 1021; and, on the application of heat and acid, albumen is evidently present in considerable bulk,—quite one-half that of the fluid tested. Placing a drop upon a slide and examining it microscopically, you notice the elements found in the former specimen,—granular casts, colored granules and flakes, and epithelium. But there is something more. By only superficial study of the field, those at all experienced notice that more than one of the casts in view contain, in addition to granular matter, blood-corpuscles,—constituting them, therefore, blood-casts,—while free corpuscles are also present, altered, it is true, but still capable of showing, by transitional focusing, the reversal of lights and shadows by which we can always distinguish these bodies. You will perhaps recognize the blood-casts and corpuscles by their resemblance to the little drawing which I pass among you, and which was made from a slide containing a specimen of this urine. (*Fig.* 2.) Some of the casts in this specimen contain so little granular matter—are, indeed, so nearly empty—that they may be called *hyaline*. Many are fragmentary, but others are of considerable length, and they are generally of medium diameter, averaging perhaps the one-thousandth of an inch.



In another respect also do the microscopic appearances differ from those of the specimen examined at an earlier date. The dark-red color which was described as characteristic of the free granular matter when aggregated, as well as of the casts, is not here present, owing to the fact that the hæmato-globulin to which it was due has been dissolved out by the water, in which it is slowly soluble. The same agent has altered the shape of the corpuscles so as to make them more difficult of detection.

The comparative study of these two specimens of urine from the same patient is interesting chiefly from

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this fact, that in one blood-corpuscles are absent, and in the other abundantly present. It also proves that in this instance, at least, the discharge is one of true blood, if the large quantity of albumen present, in connection with the red color, will not be admitted to prove the same fact. The presence of corpuscles is also interesting from the fact that, in the large majority of cases reported, blood-corpuscles are wanting. So general is this, that Dr. Beale, in *The Practitioner* for August, 1868, does not hesitate to declare that "the urine in these cases does not contain blood." He says, moreover, that in not one of five or six cases which have been under his care could he detect blood-corpuscles by the most careful microscopical examination, and that the quantity of albumen was much less than would have existed had the deposit been one of blood-corpuscles; finally, that it is improbable that in these cases there is any hemorrhage as in acute inflammation of the kidney, "and they ought not to be spoken of as cases of hæmaturia." With regard to the casts, he says "they seem to consist of mere mucus, and contain no cells of renal epithelium, blood-corpuscles, or other bodies derived from the uriniferous tubes. The dark granular matter frequently seen completely disappears on exposure to a gentle heat, proving that it is due to the presence of urates rich in coloring-matter, which have been deposited upon and in the substance of the casts."

So, also, in most of the cases reported by Dr. Harley and Dr. Dickinson in *The Medico-Chirurgical Transactions of London*, vol. xlviii., 1865, the urine did not contain corpuscles; and in the case of Dr. Harley which contained them, not more than one or two could be detected in the field under examination. Accordingly, Dr. Harley, in the paper cited, makes "the almost total absence of blood-corpuscles, notwithstanding the hemorrhagic appearance of the urine," characteristic. And it will be recalled that the first specimen of urine here examined, taken alone, quite justifies this conclusion. According to Dr. Harley, also, the albumen in these cases differed very materially from the albumen of blood-serum, in its ready solubility in an excess of acid. In our own case such solution did not occur. Neither in this case did the granular matter disappear on the application of gentle heat. In all other respects, however, of clinical history, physical phenomena, and, as will appear, results of treatment, the present case corresponds sufficiently with the set of cases included under those of "intermittent hæmaturia." To complete the analogy, the same colicky pain described as occurring in this case was also noted in the cases of Dickinson, and lumbar pain, in some instances extending down the thigh and into the testicles, with retraction of these organs, was common in the cases of both Harley and Dickinson. Harley also noted an increase in the quantity of urea, but, unfortunately, no volumetric analysis was made in our own case. I have had no hesitation, therefore, in including this case in the same category.

Whatever may have been the exact source of the bloodlike fluid in the cases reported by the eminent English authorities above alluded to, the different means of physical study employed in this case undoubtedly point to a hæmal origin, and the urine might be strictly called bloody. That the results of the examination of the first and second specimens of urine, taken in connection with the observations of Harley and Beale, throw some additional light upon the subject, I am inclined to believe, and hope to be able to show by a more detailed consideration of the significant features of this and other cases. Admitting, however, as we do, on the evidence of these eminent gentlemen, the existence of cases in which the corpuscular blood-element is wanting, I have purposely used the term "bloodlike" fluid in defining the disease.

What, then, are the significant features of these cases, and what is to be learned from them? First, as to the frequent absence of blood-disks in the urine, while a granular débris, apparently resulting from their disintegration, is abundantly present. While the hæmal nature of the fluid must be admitted, does it not clearly point to a disorganized state of the blood, whatever the cause of the disease or the seat at which disorganization takes place? The indestructible nature of the granular particles implies an organic origin, which is best accounted for on the supposition that they are the débris of blood-disks. The history of the formation of the derivatives (hæmatin, hæmin, hæmatoidine) of hæmato-globulin from its solution, furnishes no parallel to the prompt and sudden appearance of these insoluble granular elements.

The second significant feature is the *chill*, or a sense of coldness. This is marked in nearly every case. Dr. Harley asked one of his patients suffering with this disease what was the matter with him, and received the following reply: "I can't tell you; but each time I get cold hands or cold feet I pass bloody urine, while my urine at other times is perfectly healthy." This is true of our patient. He complains of coldness in his fingers and toes during the time his urine contains blood. In another case of Dr. Harley's the thermometer in the axilla indicated $96\frac{1}{10}$° F. On the authority of the same writer, intermittent hæmaturia is a disease of cold climates or of cold seasons of the year. The present case began in October, and continued with little abatement until April 1; and the patient is certain that exposure to dampness or rain is an exciting cause of his attacks.

A third element of this case requiring further allusion is the fact that there is no clearly-defined malarial history. In certain cases reported by Harley there was clearly such a history; in others, however, there was none. But there are scarcely any circumstances under which, at least in this country, malaria can be excluded, since cases of undoubted malarial disease are constantly springing up in the densely-populated portions of this city, where no malarial influence could have been before suspected. Though not clearly traceable, therefore, in this instance, it cannot be set aside, especially as there are some elements of the man's condition which point to it. Thus, he is sallow, and his conjunctiva slightly icterode. He states also, though somewhat hesitatingly, that he becomes much more yellow during the attacks.

On the other hand, we can attach no significance to the fever and sweats. Moreover, cases are reported by Drs. Harley and Dickinson in which mere exposure to cold, or the prevalence of cold east winds, was the exciting cause of an attack; and, in the present instance, getting wet seems also to have induced attacks. Again, it is well known to persons having suffered with malarial disease, that a cold damp day, or an east wind, constantly induces the chilly feeling, and especially the pains above described as occasionally present.

It will be apparent to you, therefore, that from these facts it is difficult to draw a definite conclusion as to the *nature* of this affection. Before, however, even attempting to draw any conclusion, let us determine how far the kidney is involved in the affection. Since we have undoubtedly either blood or disorganized blood present, and no evidence of renal derangement beyond what can be accounted for by the presence of such blood, we conclude that it is a blood- rather than a kidney-disease, and that the kidneys are merely engaged in eliminating the results of such blood-affection. It is now commonly accepted that the liver and spleen —the latter especially—possess the function of working up the effete blood-disks. When these organs, from any cause, cease to continue this function, some other must take on the substitutive action; and one of the organs

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which is constantly replacing the office of the liver at least, is the kidney. It is not unreasonable, therefore, to admit the existence of such supplemental action in the present instance, and to conclude, in consequence, that either as the result of disorganization of blood-disks more rapid than the liver and spleen can accommodate, or, on the other hand, as the result of a deficient action of either of these organs, the kidneys are compelled to assume a supplemental one. In some instances physical exploration has revealed an enlarged liver and spleen, but in no instance have I been able to discover further evidence than is afforded by this and the occasional presence of jaundice, though Beale states that there is usually abundant evidence, that the function of these organs is interfered with. Admitting, however, the possibility of such interference, it seems more reasonable to account for the phenomena present on the ground of a rapid disorganization of blood-corpuscles and the elimination of their débris by the kidney, without attempting to give the exact seat of such disorganization.

But, having concluded that this affection is one of disorganization of blood-disks, what is its *cause?* Of this we are perhaps less ignorant. Some cases are undoubtedly due to malaria; others cannot rationally be so accounted for; and, in a few instances, direct exposure to cold seems to be at least the exciting cause. But when we recall what has been said with regard to the effect of cold winds and dampness upon those who have been subjected to malarial poisoning, we may justly say that perhaps from none of the cases of true intermittent hæmaturia can malarial influences be excluded.

This condition must not be confounded with either of two others attended with intermittent discharge of bloody urine. The first is that form which is often met with in our Southern States, and is variously known as hemorrhagic paludal fever (Faget), hemorrhagic malarial fever (Michel), bilious hæmaturic fever, black jaundice (Ghent), cachemia hemorrhagica (Owens), icterode pernicious fever (McDaniel), intermittent icteroid fever (Sharp), pernicious icteric fever (Daullé), malignant congestive fever (Osborn), purpuræmia (Riggs), yellow remittent (Sholl), yellow disease, and canebrake yellow fever. This is a disease of *evident* malarial origin, preceded by ordinary paroxysms of intermittent fever, and characterized by violent chill, followed by febrile movement and profuse perspiration, nausea, vomiting, and often purging of black, tarry-looking matter, by rapid jaundice, often impacted gall-bladder, and not only hemorrhage from the kidneys, but also from all mucous and excoriated surfaces, as that produced by a blister. It has been stated that it is common in the southern part of the United States; but it is by no means confined to these limits, but occurs wherever malarial poisoning occurs in its intensest degree, as in the Danubian provinces, in Madagascar, Cayenne, and the West Indies. You will find admirable papers on this subject, by R. F. Michel, in the *New Orleans Journal of Medicine* for July, 1869, and by J. C. Faget, in the same journal for October, 1869, in which will be found references to the literature of the subject scattered throughout the Southern journals since 1859. In this disease there is also sudden, great, and lasting prostration, while in the form of intermittent hæmaturia under consideration there is a marked freedom from great debility, and often the patient appears otherwise quite healthy. Again, hemorrhagic malarial fever is said by those who are familiar with it to be even more fatal than that form of malarial fever known as congestive fever, of which it is indeed perhaps a serious form. The disease under consideration is never fatal, and generally is quite amenable to appropriate treatment.

Intermittent hæmaturia may be temporarily mistaken for another affection attended with intermittent discharge of bloody urine, which has also been studied by Dr. Harley, and called by him *endemic hæmaturia.* This disease, as far as studied, has been found to originate at the Cape of Good Hope and Natal, and affects adult European colonists and coolies imported. The natives and Malays, or negroes formerly imported as slaves, are apparently exempt. This form of hæmaturia has been clearly traced by Dr. Harley to the presence in the kidney of a parasite, a species of Bilharzia, the ova of which are found in great numbers in the urine. Once familiar with the existence of this disease and the few facts I have stated with regard to it, there is scarcely a possibility of its being mistaken for the form of intermittent hæmaturia now under discussion.

Treatment.—Finally, there is undoubtedly further evidence of the cause of this affection in the results of treatment. It has been shown by the observers so often quoted that the method of treatment of malarial affections so familiar to the older practitioners of this country—the occasional administration of a purgative dose of a mercurial previous to and during the use of the salts of quinia—has been most effectual in these cases, where the more usual plans of treatment, such as cupping over the loins, have signally failed; and although this patient has been somewhat irregularly on the use of quinine during the winter, we will now pursue this plan systematically. Accordingly, it is ordered that he take at once (March 23) gr. x of calomel, followed by a dose of oil in the morning, and, after his bowels are moved, gr. xviii of the sulphate of quinia daily, in six-grain doses.

Concluding Note.—Thursday, May 4, the patient again presented himself, and stated that he had had no chill for five weeks after the day of his last visit, having continued, except for two or three days towards its close, to take the prescribed quantity of quinine: on these few days he had either omitted the treatment entirely, or taken a smaller quantity. On Thursday, April 27, however, a cool and rainy day, he got slightly wet after dinner; and at 3½ P.M. he had a violent chill, followed by a discharge of the same bloody water, but his urine was again clear by bedtime. On that day he took gr. vi of quinine; during the week between the occurrence of this chill (April 27) and the 4th of May he was irregular in taking his medicine. On May 4 the quinine was reduced to nine grains a day, and up to the present time, June 21, a period of thirteen weeks, no paroxysm of bloody urine has occurred, and he is working daily at his trade. He has not taken the antiperiodic for several weeks.

From these facts in the clinical history, physical condition of the urine, and results of treatment, there seems reason to believe that this condition, which of all the sets of symptoms attended with the discharge of blood-like urine is best called "intermittent hæmaturia," *is a blood-affection, attended with a rapid disintegration of the corpuscular elements, and the elimination of the débris of these by the kidneys; that its cause is most probably one of malarial nature, though it must be admitted that some cases can be but partially accounted for on this supposition.*

TREATMENT OF OTORRHŒA BY SPIRIT OF WINE.—Dr. F. E. Weber (*Berlin Klin. Woch.*, January 9, from *Med. Times and Gaz.*, February, 1871, p. 239) states that spirit of wine is the best topical application in cases of otorrhœa uncomplicated with caries or polypous growth. The ear must first be well syringed out; then, the patient lying down, as much of the pure spirit as the ear will contain is poured in and allowed to remain five minutes. After the spirit flows out, the meatus must be dried and plugged so as to prevent the access of air. At first it is to be applied three times a day, then twice, and is to be continued for some time after the otorrhœa has ceased.

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ORIGINAL COMMUNICATIONS.

A HISTORY OF AN EPIDEMIC OF PURULENT OPHTHALMIA

OCCURRING IN THE PHILADELPHIA HOSPITAL DURING JANUARY, FEBRUARY, AND MARCH, 1871.

Read before the Philadelphia Hospital Medical Society, April 15, 1871,

BY T. D. DAVIS, M.D.,

Resident Physician.

ON the 13th of December, 1870, a child named Annie Evans, aged nearly 7 years, was admitted into the nursery of the Children's Asylum, apparently in good health. A few days after, the nurse discovered that she had a profuse vaginal discharge, which she described as "nasty greenish-yellow stuff." For this nothing was done but to keep the parts clean. About ten days after admission, a thick yellow discharge was noticed running from both eyes, and in five days from this, December 28, she was transferred to the infirmary. In the quarterly report for the term ending December 31, hers is the only case of purulent ophthalmia recorded.

On taking charge of the wards in connection with my colleague, Dr. Spencer, on January 6, we found fifteen cases of sore eyes, of a character so decidedly purulent that we concluded to isolate them immediately.

Of these fifteen cases, five were from the nursery where Annie Evans had first been, one of them having been her bedfellow; the remainder occurred in the infirmary after her introduction there. After the separation of the children, which was as complete as possible,—those affected being kept from eating with, sleeping with, or even seeing the others,—there was an immediate decrease in the number of new cases; and after a few days there was not a single new case, except it was in a person who had charge of the affected children, or was in some way thrown with them. The total number of cases treated was forty-five, and at the close of our term of service, on the 1st of March, there were but three persons in the eye-ward who had not been troubled with some other disease of the eye before the epidemic. Of these three, one was Annie Evans who was first affected. Eight corneal ulcers occurred and three corneæ sloughed, two of the latter being in an idiot boy whose eyes were already very much diseased, and the other in a little girl whose lids could not be forced open for over a week. All of the ulcers healed up completely, without permanently injuring the eyes. From notes carefully kept on many of these cases, and from experiments tried, I have made the following observations and deductions:

In this frightful and disgusting disease the symptoms manifest themselves very suddenly. The patient may go to bed feeling perfectly well, and on arising find his eye swollen to the extent of complete closure, and discharging large quantities of thick straw-colored pus. In two cases, examined carefully at 9 A.M., no sign of disease could be seen, and at 3 P.M. of the same day the eyes were discharging the characteristic pus quite freely. The period of incubation is somewhat uncertain; one case occurred within twelve hours after the time she was subjected to the contagion. Another child, having been discharged too soon, returned in two days along with several new cases.

The adults who were affected, first noticed a watering of the eye, and a sensation as if dust had been blown in it, some feeling confident that a grain of sand was actually in the eye. There was also slight photophobia. During this period the inside of the lids was congested and of a bright-red color, without much injection of the arteries of the conjunctiva. Within six hours from this stage, if nothing is done to arrest the disease, the lids become fearfully swollen, the conjunctiva greatly chemosed, a thick yellow pus commences to issue from the eyelids, and the photophobia becomes intense, with severe pain. The parts may become still more profoundly altered. The chemosis may so extend as to overhang the cornea, making it appear no larger than the natural pupil, while the white of the eye entirely disappears. The lids swell still more, becoming dark-red or purplish on the outside, and may be so puffed out that it is impossible to evert them or open them in any way so far as to see the cornea. In this stage the cornea may become clouded, and in a short time slough away, letting the humors of the eye escape; or small ulcers may appear, from the size of a pin's head to that of a split pea. If the eye escapes this extreme degree of inflammation, the lids become completely covered with small pearl-colored granules. The retrotarsal fold of the conjunctiva is everted, presenting a deeply-serrated appearance. The pus still pours out from between the lids, which have no tendency whatever to recover, but rather to persistent chronic granulation.

The cause of this epidemic we believe to be solely contagion from the pus originally furnished by the child Annie Evans. There was, throughout, no case that could not be traced directly to another previously diseased. Nor were any of the attendants having charge of the children attacked until accident caused them to receive some of the discharge directly in the eye. The immediate cessation of the epidemic on the separation of the affected children from the others, and its speedy recurrence on one of them being discharged too soon, prove emphatically its dependence on contagion. On inquiry into the history of Annie Evans, we found that for some time before her admission here she had been living at St. Vincent's Home in this city. Both the physician in charge and the lady superior declared that there had been no purulent ophthalmia in that house for over three years. The similarity of the child's leucorrhœal discharge and that from the affected eyes led us to suspect that there was some relation between them. We also noticed that when nothing was done for the leucorrhœa the eyes remained in statu quo, do what we would; but on relieving the leucorrhœa, the eyes improved, and on again interrupting treatment of the leucorrhœa, in order to obtain some of the discharge for experiment, the eyes soon became worse.

We took some of this vaginal discharge and put it in the right eyes of two kittens. The pus had become a little dry, and was moistened with water before its introduction. Nothing was noticed in the next twenty-four hours, except that the inoculated eyes were a little more watery than the others. The kittens were not seen for several days, when I was not surprised to find them having well-marked purulent ophthalmia, and four more kittens of the same litter had been inoculated by the other two. From this experiment and the other facts, are we too hasty in attributing the origin of this epidemic to the primary leucorrheal discharge of this child?

The *prognosis* depends much upon the time the eye comes under treatment. If seen within the first few hours of its inception, the disease can be speedily checked; but if allowed to run on too long, there is great danger of total blindness from ulceration or sloughing of the cornea, or, if this be escaped, a long attack of granular lids.

The *treatment* is as varied as the authors are numerous who have written on it. But we have placed above all others the judicious use of nitrate of silver. A fearless and skilful use of this in the first stages will check the disease immediately, if seen within the first twelve hours or before the lids are much swollen. The lids should be turned out, and thoroughly touched in

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every part with a solution of nitrate of silver (gr. xxx–xl to f℥j of water), which will check the disease without injury to the eye, while a weaker solution so employed seems to add fuel to the flame. If the lids are greatly swollen and the conjunctiva chemosed, a still stronger solution may be employed,—the severity of the symptoms abating as if by magic.

Leeching, in the cases in which it was tried, seemed to have had no good effect; in fact, the patients thus treated suffered for a longer period than the others. Cold applications had the happiest result in relieving pain, but did not seem to affect the inflammation. Solution of sulphate of copper and the solid salt were used, but were abandoned for the nitrate of silver.

Various injections and washes were tried, but I believe cold water was as good as any of them. The bowels were kept regular, and strict cleanliness was enforced, each patient having a separate basin, towel, rags, etc., and the eye syringed every hour with some such solution as

Hydrargyri Chloridi Corrosivi, gr. j,
Pulveris Opii, gr. xvj,
Liquoris Calcis,
Aquæ destillatæ, āā, f℥iv,

or some astringent solution, as of alum or sulphate of zinc, or simple cold water. If the disease was not conquered at once, daily applications of nitrate of silver were made with a brush. If granulations sprang up, weak solutions of the same substance were continued, the strength being graduated by the degree of pain caused, which was never allowed to exceed slight smarting. This solution was used in preference to any other treatment, because we found that it caused the granulations to disappear very rapidly and without pain. The treatment of the corneal ulcers consisted in simply securing the eye from pressure or roughness; and it was eminently successful, as every one recovered without injury to the eye, and two healed without a mark to show there had ever been disease there.

As to any other treatment, I believe good food and pure air to be of paramount importance, and internal medication needless. We could not see the least advantage in the use of cod-liver oil, the patients improving rather faster after discontinuing it. Several cases were salivated by dusting calomel in their eyes, and one or two gums were touched by its use internally, but we could not see that it was in any way beneficial; it appeared rather harmful. After experiments with the most plausible plans of treatment suggested, we have placed at the head of our list cleanliness, pure air, and nitrate of silver.

ON INFLAMMATION OF THE LONG SAPHENOUS VEIN.

BY HARRISON ALLEN, M.D.,

One of the Surgeons to the Philadelphia Hospital.

THERE have been presented at the clinic of the Philadelphia Hospital within the past six months several cases of inflammation of the internal saphenous vein, some account of which will form the basis of the following notes and comments:

Case I.—Wm. B., aged 71, with defective sight, fell through a cellar-door, on the 23d of October, 1870, to the floor beneath, incurring a severe contusion over the upper third of the right leg, anteriorly. He was able to walk after the accident, and thought no more of the affair until about two weeks afterwards, when the leg became painful, and an attack of erysipelatous inflammation supervened below the point of contusion. On the fifth day of this attack he was admitted into the hospital. The note taken at this time describes B. as a nearly blind, decrepit, emaciated man, the subject of tertiary syphilis, as evidenced by depressed cicatrices on the vertex (following necrosis of the outer plate of the skull), osteocopic pains, cicatrices in the groin, and the presence of a node on the right shin. A diffused purplish-red flush was seen over the right leg at its upper half anteriorly, in the centre of which was the crust of an old abrasion. A large patch of ecchymosis extended from the inflamed area to the ankle, due, it was thought, to the patient having worn an ill-fitting, roughly-mended boot. The region of the calf was occupied by large watery blebs. The entire leg was œdematous and painful; the foot, however, was not involved. The thigh was of a tallow-color, and marked with irregular red stripes along the course of the branches of the superficial veins. The position of the internal saphenous vein at and above the internal condyle was indicated by a thickened red stripe. Along the course of the latter vein, at the middle of the thigh, a distinct patch of periphlebitic induration, covered with minute vesicles, was noticed. A single engorged lymphatic gland was detected in the groin.

The arteries at both wrists were atheromatous. Pulsations, 90 per minute. Patient depressed, irritable. General treatment supportive. Local treatment consisted of lotions of lead-water and laudanum.

On the nineteenth day of the disease an attack of pneumonia of lower lobe, right side, was threatened. Excepting this, not to mention the recurrence of his old enemy,—osteocopia,—our patient did well; the symptoms gradually subsided, to permit convalescence to date from about the eighteenth day.

Case II.—N. W., aged 32, of slight form, nervous temperament, was admitted February 24, 1871, with an acute diffuse cellulitis about the right knee-joint. The following history was elicited: W. had served in the late war, and received during the first attack on Fort Fisher a wound in the right leg, which resulted in partial anchylosis of the corresponding knee-joint. Upon being discharged on surgeon's certificate of disability, he adopted peddling as a source of maintenance. On the evening of February 4th he injured the maimed limb at the knee, while getting off a passenger railway-car. Inflammation leading to suppuration followed, pus discharging spontaneously. Upon admission the parts from the middle third of the leg to the lower third of the thigh were reddened and swollen. Two openings of sinuses, doubtless leading towards the head of the tibia, were seen in the popliteal space. Another lay immediately to the inner side of the shaft of the tibia, near its anterior border. The skin along the course of the internal saphenous vein at and above the knee-joint was brawny and intensely inflamed. Firm pressure along its tract developed a darkish-blue line, and the hand, when drawn slowly and firmly downwards along the course of the vein, caused pus to flow freely from the opening on the leg. There was slight effusion into the joint.

During the treatment, the outline of which was similar to that employed in Case I., the parts were drained in this manner, since it was observed that by far the greatest amount of pus would flow when pressure was exerted directly along the course of the vein. The openings in the ham discharged but little. There appeared to be no reasonable doubt that we here had to contend with a suppurative periphlebitis along the tract of the internal saphenous vein, with disorganization of the knee-joint and probable threatened caries of the head of the tibia. The patient from the first refused to consent to any exploration of the parts, and he subsequently demanded his discharge, unrelieved of the condition for which he was admitted.

Case III.—Margaret B., æt. 42, had been an inmate of the house since May 7, 1869. Originally admitted for "ulcers of feet," she has remained ever since in the surgical wards of the house, excepting the interval between July 7 and September 1, 1870, during which time she was treated for relapsing fever in the medical wards.

This patient is subject to attacks of simple erysipelas of both lower extremities. The feet are deformed by scars, the result of reputed indolent ulcerations. As a rule, these attacks have had a duration of but a few days. Rest in the recumbent position, and the use of local anodynes, always speedily effected a cure. On the evening of the 6th of March an attack of the old complaint was announced by a chill, followed by high fever, the temperature at one time rising to 106°; pulsations per minute, 130. These symptoms persisted until the seventh day, when they gradually subsided. The significant cause of this marked systemic disturbance was found in the deep

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flush of erysipelas, which soon involved the entire length of both feet and legs, extending thence upwards and beyond the knees. The lower third of the right thigh presented all the symptoms of phlebitis of the internal saphenous vein. The induration and pain attendant upon this inflammation remained for several weeks after the subsidence of the erysipelatous flush.

During the summer of 1869 the writer enjoyed an opportunity, through the courtesy of Dr. Addinell Hewson, to observe the condition of the parts concerned in inflammation of the internal saphenous vein at the lower third of the thigh. A negress died of pyæmia following amputation of the leg at the upper third, performed for extensive indolent ulcerations and cicatrices. The subject was very fat. The following is the substance of the note of the dissection:

The flaps were united throughout their entire extent, excepting at the angles. The lower flap projected a little beyond the line of the upper at the inner aspect of the stump. A vertical section through the skin in the median line demonstrated complete union of the flaps to the extent of one-third of an inch. The space beyond this line and the end of the bones was lined with pus-stained granulations. Extending from the inner side of the stump along the tibia up to a point opposite the patella was an irregular, broad, shallow cavity, defined by granulations, in the abundant subcutaneous fat. The internal saphenous vein was partially involved in this tract, and at the point of contact with it was contracted in calibre. Its coats were thickened, and a small clot occupied the vein at about the knee-joint, —a second near its termination, in the femoral vein.

Remarks.—A slight amount of inflammation, with thickening, is apt to occur in the connective tissue about an inflamed vein. In subcutaneous phlebitis the brawny red line in the skin is indicative of this,—the cord-like induration of the vein being alone expressive of the phlebitis proper. At certain points the periphlebitis may become circumscribed and pass on to suppuration, as in Case I., but more commonly it retains its diffuse character, and may extend up along the tract of the vessel beyond the limitation of the involved vein itself.

This latter tendency the writer has noticed in a stump of the right foot examined after death,—the patient dying of pyæmia following amputation through the tarsus. The tissues at the inner side of the ankle were a little infiltrated with serum, but the veins lying with the internal plantar artery and between the abductor of the great toe and short flexor were conspicuously swollen and inflamed. The tract of the posterior tibial vessels and nerve extending thence up the leg was infiltrated with serum and its parts matted together.

When the veins are deeply situated, as in the intermuscular spaces, they are more liable to serve as conductors of inflammation than are the superficial ones, which, being held more firmly in position to the deep fascia of the limb, are, therefore, obedient to the general rule,—viz., that the nearer parts lie to the surface, the more compact is their connective tissue. The comparative rarity of subcutaneous phlebitis, when the vast numbers of lesions capable of producing it is considered, is remarkable, and affords an instructive contrast to the frequency of this complication after amputations and resections of bone. The general statement that phlebitis is more common with the superficial than the deep-seated veins is only correct so far as the absolute number of cases observed is concerned. When compared with their relative liability to become inflamed (the same conditions being presented to both), the latter are by far more apt to be selected, either primarily, through their own coats, or, secondarily, by periphlebitis in the soft connective tissue along their tract.*

The burrowing of pus in the case of the negress and in Case II., as well as the location of the inflammation of the vein in all the above cases, may admit of the following explanation: The internal saphenous vein at the lower third of the thigh lies along the posterior border of the inner aspect of the limb, where it is surrounded by loose fat, and is not covered in by those delicate layers of aponeurotic connective tissue which it attains higher up. This is an exceptional relation for a superficial vein, and may foster the conditions predisposing to periphlebitis. Opposite the knee-joint, the vein is surrounded with less fat, but is here quite superficial, and affords again an exception to the general course of prominent veins, in lying upon the lateral aspect of a great joint, instead of in its line of flexion. In consequence of this, the vein is less protected and liable to many abrupt changes in its relations. After amputation at the upper third of the leg, the contraction of the soft parts still further modifies these changes, in addition to which the novel action of the quadriceps extensor muscle, now (according to Beclard) tending to flex the stump by a slight shifting of its tendon towards the inner condyle, may still further predispose the parts about the site of the vein to inflammation.

The practical application of the above facts would appear to be—

(1) In cases of suspected subcutaneous phlebitis of the lower extremity, the inner aspect of the lower third of the thigh should be carefully examined. (2) If burrowing of pus be threatened after amputation at or below the knee, a compress may with propriety be applied over the position of the long saphenous vein at the points defined. (3) In case the burrowing along the inner side of the thigh has actually occurred, the parts may be drained by pressure firmly and gently exerted downward over the position of the vein.

EXTENSIVE INVAGINATION

OF THE ILEUM, CŒCUM, AND ASCENDING AND TRANSVERSE COLON IN AN INFANT SIX MONTHS OLD DEATH ON THE FIFTH DAY.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania; Attending Physician to the Philadelphia Hospital, and to the Children's Hospital.

FRANCIS N. was born on October 1, 1870. He was well developed at birth, and continued perfectly healthy, with the exception of an attack of chicken-pox and of a mild form of eczema, until March 11, 1871. He had been successfully vaccinated on March 9. He was nursed by his mother, and, after the first of the year, he took, in addition to the breast, a teaspoonful of *Nestle's Lacteous Farina* in a gill or more of cow's milk twice daily. This preparation seemed to agree perfectly with him, and he throve vigorously. During March 11, he had three healthy passages, but after nursing that evening he manifested great pain, followed by vomiting. He appeared relieved by a few drops of elixir of valerianate of ammonia, but continued restless during the night, being somewhat soothed by warm applications to feet and epigastrium. The next day he was nursed only, and at three o'clock in the afternoon he had a large evacuation, of a mud color, very offensive, and mixed with some blood. The stomach was still very irritable.

At 3 A.M. on March 13 another evacuation of the same character, but less in amount, took place, and an enema of tr. opii, gtt. iij, in starch-water, was given and retained. There were now distinct febrile symptoms, and the child

* Rarely an enlarged lymphatic gland may, by infiltration of the bed of connective tissue in which it lies, press upon a neighboring vein at a point far removed from the original suppurating surface, and aid in the development of periphlebitis. This the writer has seen in several instances in the superficial variety. In the case of a man dying of exhaustion from diffuse cellulitis of the right upper extremity, the epitrochlear ganglion was engorged and adherent to the basilic vein. The vessel was filled with a fibrinous clot,—white below, softer and blacker above,—which terminated at a valve placed about the lower third of the belly of the biceps, and directly above the position of the gland.

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refused all nourishment. Throughout the day small doses of sp. ætheris nitrosi were given, and small quantities of lime-water, with a few drops of brandy, which allayed the nausea. Towards evening minute doses of calomel (grain one-thirtieth) were given.

The following day, March 14, he was very restless and sleepless, with fever, complete anorexia, and with nausea if food was taken; he also had several stools containing some blood.

He was first seen by Dr. Ellwood Wilson in the afternoon of this day, when he was ordered bromide of potassium, gr. ij, with elix. ammoniæ valerianat., gtt. v, repeated every two hours, so as to secure sleep: a dose of castor-oil was also given to him. The laudanum enema was given him again that evening after a profuse discharge, and a few hours afterwards was repeated upon his having another discharge of nearly pure blood, amounting to more than a fluidounce.

On March 15, Dr. J. Forsyth Meigs saw the case in consultation with Dr. Wilson. A large lump had made its appearance in the left iliac region. The irritability of the stomach continued, and there were still frequent bloody stools, which now looked like bloody water containing shreds from the washings of scraped meat. Later in the day, several quite large masses (about the size of shellbarks) of hard insoluble matter were removed from the rectum. These masses bore the marks on their surface of the mucous membrane, with traces of clotted blood. Their removal gave the child some relief The masses removed from the rectum consisted largely of organic matter (starch-granules, gummy matters, a few blood-corpuscles on the exterior), with some soda and potash salts. Upon the introduction of the finger a circular rim of bowel could be distinctly felt in the rectum. During the day the child took three teaspoonfuls of milk, and one of lime-water, with twenty drops of brandy every half-hour.

In the evening, the tumor in the left iliac region appeared even larger, and the invaginated bowel could be distinctly felt by the finger introduced into the rectum. The distress and exhaustion of the child were very great. Vomiting was not so frequent, and consisted merely of the ingesta, no stercoraceous matter having been rejected. Warm water was thrown copiously into the bowel, but escaped immediately from the anus, without affording any relief.

The milk and brandy were continued and retained. Near midnight, however, the child became much excited, and small doses of elixir of valerianate of ammonia were given in the place of the stimulus, with a soothing effect.

Death occurred the following day, March 16, at 9 A.M. The development of the vaccine pock continued for a few days after the beginning of the attack; it then aborted, and dried up into a thin, brown crust.

An autopsy was performed thirty hours after death. The body was well nourished. The left arm bore the dried scar of the vaccine pock, which had aborted. The abdominal cavity alone was examined. On section, the right part of its cavity was seen occupied by folds of small intestine, which were of normal appearance, but much distended with gas. There was no trace of the cœcum or ascending colon on the right side, but on the left side, in the place of the sigmoid flexure of the colon, was seen an elongated oval mass, which extended from the left iliac region towards the left hypochondrium, disappearing under some coils of small intestine. On tracing down the ileum, it was found to terminate by apparently plunging directly into the descending colon, at the upper end of the mass above described. The mesentery was tightly wound around the ileum at the point of entrance. It was thus evident that the lower part of the ileum had passed through the ileo-cœcal valve, and that the cœcum and ascending and transverse colon had successively been invaginated, until the whole mass was forced down the descending colon and rectum to within three inches of the anus. The descending colon, which formed the sheath, was opened and found but little congested, and not at all thickened up to near the point of invagination, where its walls were thickened and discolored. The mucous surface of the invaginated bowel was intensely congested, much discolored and roughened, and presented numerous shreds of grayish lymph. The most dependent portion of the invaginated mass (where the colon was doubled upon itself again to form the internal layer) presented a slit-like orifice with thick rounded lips, not unlike the os of a multiparous uterus. An incision was made through the middle layer of the invaginated mass (formed of transverse and descending colon). The wall of the bowel was at least one-fourth of an inch in thickness, softened and intensely congested. The space between the middle and internal layers of the invagination was occupied by recent succulent lymph, presenting already numerous delicate organized fibrillar trabeculæ. The vermiform appendix of the cœcum was found coiled up in this space, imbedded in the lymph. It was about one and a half inches from the lowest part of the invaginated mass. The entire length of the invagination was seven inches, so that the amount of bowel invaginated was at least fourteen inches, but, owing to its puckering and plication, was probably nearer eighteen inches. The extreme congestion and thickening of the invaginated bowel had led to its firm incarceration, so that it was impossible to withdraw the ileum, even by the use of considerable force. The intestine above the point of intussusception was distended with fluid yellowish fecal matter. The rectum contained a little blood-stained mucus.

Remarks.—This case confirms the result of the statistics of invagination, that this accident is most frequent between the third and sixth months of life. It also illustrates the fact that in infants the almost invariable seat of the invagination is the lower end of the ileum, which passes into the cœcum. As in most cases of fatal invagination in infants, the subject was in vigorous health, and it is extremely difficult to suggest a probable cause. It is most likely that the presence of the large masses of starch and inorganic matter found in the rectum was the cause of the disturbed peristalsis which preceded the intussusception. We can readily imagine how such masses as these, or how even a small portion of such matter, experiencing difficulty in passing the ileo-cœcal valve, would induce violent peristalsis of the lower end of the ileum, which might result in that part of the bowel being protruded through the valve immediately after the escape of the obstruction. In a case reported by Gorham (Guy's Hospital Reports, 1st series, vol. iii., 1838, p. 330), occurring in a healthy infant of four months, the only assignable cause was the administration of panada for three days preceding the attack. It is not my intention, however, to comment upon the use of Nestle's Farina for very young infants, nor do I wish to be understood as saying that the masses found in the rectum in this case are evidences of any peculiar unfitness on the part of that article to serve as food for such children. It is most probable that they were due to some defects in the cooking of the food, although it had been prepared carefully by the same person who had been accustomed to cook it from the first time the child took it. The occurrence of a number of cases of invagination also under circumstances where no irregularity or impropriety of diet can possibly be attributed as a cause, warns us that in the present case the existence of these masses in the rectum may possibly have been merely a coincidence, though I confess to regarding them decidedly as the cause of the invagination.

The symptoms in all respects corresponded to the well-known clinical history of invagination. The vomiting was frequent, but never—and this is nearly always the case in infants—stercoraceous. There was an absence of fecal evacuations, but frequent and quite abundant bloody discharges per anum, which constitute perhaps the most constant and valuable symptom of invagination in young infants. The peculiar character of the discharges in this case did not appear until the fourth day, when the bloody mucus became mixed with shreddy flakes of false membrane. Abdominal pain was, as usual, marked. The presence of *tumor* in this case was not determined until the end of the fourth day, when it was found in the usual place,—in the left iliac fossa. This case confirms the correctness of the opinion

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expressed in the article on Intussusception in Meigs and Pepper on Diseases of Children, 1871, p. 426, as to the importance of rectal examinations in cases of invagination. It is stated by some authors that *protrusion of the invaginated bowel from the anus* very rarely occurs; but I am satisfied that in nearly all cases where a tumor can be detected in the left iliac region it will be found either that the invaginated bowel presents at the anus, or can be reached and detected by the finger passed into the rectum.

Unless the invagination in infants be reduced within the first three days, death usually occurs within five days, as in the present case. In regard to the treatment, it is unfortunate that the symptoms were not sufficiently diagnostic to enable the disease to be positively recognized until the invaginated bowel had become so firmly incarcerated that it would have been utterly impossible to effect its reduction, either by large injections of air or of liquid into the rectum, or even by traction after the performance of gastrotomy.

The specimen is designed for the Museum of the College of Physicians.

NOTES OF HOSPITAL PRACTICE.

CHILDREN'S HOSPITAL.

SERVICE OF JAMES H. HUTCHINSON, M.D.

One of the Attending Physicians to the Hospital.

ENORMOUS ENLARGEMENT OF THE LIVER FROM AMYLOID DEGENERATION.

K. M., aged about 12 years, has been a patient at the hospital for the last two years, suffering from curvature (antero-posterior) of the spine. The history that can be obtained of her case is unfortunately very meagre, as both her parents are worthless and seldom come to see her, and, when they do, are frequently intoxicated. It appears, however, that several years ago her father knocked her down, and then beat and kicked her. Her mother thinks that she received some injury at that time, but it was not until two years later that her mother noticed that she "walked *crooked*," and supported one arm with the hand of the other. Shortly after this, she was placed in the hospital, where she has been the greater part of the last four years,—the date of her last admission being about two years ago. About eighteen months ago a collection of pus (psoas abscess) formed over the right trochanter, which was shortly afterwards opened by Dr. Bache. Ever since, the daily discharge from it has been enormous, and the case, from the number of sheets and dressings soiled by the discharge, was a constant cause of complaint from the nurse and servants.

When a physical examination was made, the lower border of the liver, which was very sharp and firm, could be felt below the level of the umbilicus.

More accurate examination led to the following result: Circumference of most prominent part of abdomen, 26½ in.; at base of chest, 26 in.; at umbilicus, 23½ in. Length of dulness, in the line of nipple from fourth rib to point below umbilicus, 9½ in. Distance from ensiform cartilage to umbilicus, 5½ in.; to pubis, 9¾ in. Pressure over the liver in the lateral regions of the abdomen gave rise to pain, but there was no evidence of tenderness elsewhere.

The urine contained a small amount of albumen, indicating the presence of a similar degeneration of the kidneys. No marked tendency to epistaxis or to diarrhœa existed.

The patient died September 3, 1869, probably four years after the spinal curvature was first noticed.

CONGENITAL SYPHILIS—SYPHILITIC NODULE IN THE LIVER—ALBUMINOID DEGENERATION OF THE LIVER AND SPLEEN.

Mary A. B., æt. 12, a pale and poorly-nourished child, was admitted into the Children's Hospital.

Very little of her previous history could be obtained from her parents or from herself. It appeared upon inquiry, however, that she had passed part of her life in a malarious region, and had suffered from intermittent fever and other forms of malarial disease, but it could not be ascertained that she had ever had any eruption upon her skin. The teeth are, moreover, well formed, and she does not appear to have suffered from syphilitic keratitis. There is, however, slight widening, with some depression, of the bridge of the nose. When admitted, she was suffering from granular lids, a slightly nebulous condition of the left cornea, chronic ozæna, and an excoriation of the upper lip, produced by the discharge from the nostrils. Upon examination there was found to be slight relative dulness over the upper part of left lung, and the respiratory murmur was harsher there than over the corresponding region on the other side. Her eyes were rather prominent, giving her a peculiar staring expression. Her complexion was of a slightly greenish-yellowish hue. A hard nodule could be felt in the epigastrium, a little to the left of the median line, giving to the finger the same sensation as is imparted by the contracted uterus. It was painless on pressure, and by palpation its continuity with the liver could be readily established. The child said she had felt it for at least a year.

May 5.—When the child was undressed, a decided enlargement of the hypochondriac zone was at once detected. The following measurements were taken:

Distance from the ensiform cartilage to pubis, . . 11 in.
" " " . " umbilicus, 6 "
Circumference over most prominent part of abdomen, 26½ "

The spleen could be felt reaching two inches below the arch of the ribs. Hepatic dulness began in front at nipple, and extended two inches below the arch of the ribs; in the axillary line, at the sixth rib.

The patient, who up to this time had been treated with cod-liver oil and iodide of iron, was directed to have iodide of potassium, gr. iii, three times daily.

May 28.—The hypochondriac zone was observed to be even more distended than on May 5, and the circumference was found to be 27⅛ in. The liver extended from the fourth interspace on the left side to a point three inches below the arch of the ribs. The spleen was even larger, extending fully an inch lower down.

July 1.—The patient was sent to the country.

September 1.—Upon her return from the country, great improvement in her general symptoms was found to have taken place, but there was no change in any of the physical signs presented by her.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, JUNE 14, 1871.

Reported by Dr. Elliott Richardson.

PARALYSIS AND ATROPHY OF LEG FOLLOWING THROMBUS.

THIS patient was a man 33 years of age, by occupation a machinist. The history of the case, as nearly as it could be gathered from the patient, was as follows:

Seven months ago he had an attack of typhoid fever, and was confined to bed for six months. There must have been some complication to have occasioned so long a sickness. About four weeks after he was first taken sick, a lump the size of a walnut appeared in the popliteal region of the right side, and at the same time the leg became cold and the seat of severe pain.

Probably had the arteries below the knee been felt at this time, no pulsation would have been discovered in them, for these symptoms were undoubtedly produced by a thrombus in the popliteal artery, cutting off the circulation through the branches of this artery in the leg.

That this accident should have occurred indicates a serious deterioration of the blood at that time, and a condition of the system of great gravity.

The formation of thrombi in the arteries of the extremities is often followed by gangrene of the limb. This is usually of the moist variety; but rare cases of dry gangrene from this

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cause have been known. This case had been very judiciously treated by the application of warmth until the circulation had been re-established.

When presented at the clinic, there was considerable atrophy of the right leg, with loss of power in a great degree. He could bear some weight upon the heel, but not upon the rest of the foot. This loss of power had existed for four months.

While investigating the present condition of the affected limb, Prof. Agnew said he could detect no pulsation in the posterior tibial, and but slight pulsation in the anterior tibial. He could feel no lump in the popliteal region, but there was a density and cord-like condition of the vessels of the part. The popliteal artery had been obliterated. There was a little point on the inner edge of the sole of the foot red and exquisitely sensitive, probably a forming abscess, due to an impaired nutrition of the part from the irregular supply of blood. The paralysis was due to the pressure of the original thrombous tumor upon, and probably adhesion to, the popliteal nerve, which is the chief source of nervous supply to the leg.

Prof. Agnew said he thought the condition of the limb would improve in time, and that under the use of tonics and the application of faradization and passive movements to the affected limb the patient would ultimately recover.

CONGENITAL HERNIA.

A little boy, one month old, presented a swelling running from the scrotum along the right groin towards the abdomen. This swelling was congenital, and presented some points of resemblance both to hernia and hydrocele.

If the latter, Prof. Agnew said it would disappear without surgical treatment, for such was always the tendency of congenital hydrocele; if the former, with the aid of a proper truss the result would be equally favorable, as hernia in one so young in nearly all cases admits of permanent cure by this treatment alone. On a further investigation, compression of the abdominal contents was found to increase the size of the tumor, and gurgling was detected on manipulation. Prof. Agnew said this was undoubtedly a hernia, and its transparency due to serum in the hernial sac.

Prof. Agnew then reduced the hernia, and directed the application of a hard rubber truss. He said it was a great mistake not to apply a truss early in these cases, as the earlier the application was made, the more rapid and complete would be the cure.

The truss should be removed twice a day, and the part bathed with alum and whiskey, to prevent excoriation, otherwise apt to occur.

Under this treatment a cure may be looked for in about eight months.

ANCHYLOSIS OF KNEE.

This patient, a boy, aged 8 years, had for the past four years suffered from an affection of the right knee-joint. On exposing the affected limb, the leg was found to be strongly flexed upon the thigh and its muscles atrophied. The knee was swollen and painful, and the patella displaced.

Prof. Agnew said that severe and long-continued pain in the region of joints always produced wasting of the muscles, and such had been the circumstance in this case. The swelling of the knee increased in wet weather, but again diminished when the atmosphere became dry. The motion of the joint was very limited, but it was impossible, without producing anæsthesia, to tell how much of this was due to the will, and how much to anchylosis; but a good deal of the latter undoubtedly existed. There did not appear to be much fluid in the joint, as the patella was in close contact with the bone.

Prof. Agnew directed ether to be administered, and said that, if necessary in order to obtain free motion, tenotomy would be performed.

The patient was etherized, and the limb was straightened without division of tendons. A straight posterior splint was applied, and the boy was sent home, with instructions to keep up extension by means of a metallic splint, jointed at the knee, and in about a week efforts at walking could be made.

AXILLARY ABSCESS.

This was a case of abscess in the left axilla of a man 27 years of age. The abscess had followed a slight contusion of the arm from a fall.

Prof. Agnew said it was not uncommon to see such abscesses in the axilla or groin from trifling injuries of the extremities. They generally indicate a condition of the system requiring tonic treatment.

The abscess not being ready to open, the patient was directed to apply a poultice, and to take fifteen drops of the muriated tincture of iron three times a day.

CYSTIC DISEASE OF THE BREAST.

This was a case of disease of the left breast, occurring in a woman, aged 37 years, who was in other respects in apparent good health. The diseased breast was very much enlarged,—more than double the size of that on the sound side,—and the nipple was displaced to the outer side. The tumor was nodular and elastic, and showed a tendency to point at one part where slight fluctuation was perceived. There was no involvement of the neighboring lymphatic glands, and the veins covering the growth did not seem to be enlarged.

The disease made its appearance during September, 1870, at which time the woman was nursing, and at first was the seat of severe pain; the pain at present, however, is only felt at times, and is never great. Prof. Agnew thought the growth presented every appearance of a cystic tumor.

An exploring-needle was introduced, and over f℥iv of a straw-colored fluid were drawn off through the groove in the needle. Prof. Agnew said this might possibly be the remains of an abscess, but he believed it to be a malignant cystic tumor; and if this were true, he thought no operation would be proper in the case.

NECROSIS OF PHALANGES.

This patient, a boy aged 15 years, had necrosis of the middle and last phalanges of the middle finger of the right hand. The death of these bones was the result of neglected periosteal abscess.

Prof. Agnew, in the course of a few remarks on the necessity for prompt treatment of felons, said that in the early stages, before the formation of pus had commenced, the application of tincture of iodine or caustic to the surface of the affected part would in many cases produce resolution. But after abscess has formed it should be promptly opened and free vent given for the escape of the purulent matter. These abscesses form at various depths from the surface, and are serious in proportion to their proximity to the bone.

In this case amputation of a portion of the finger was the only treatment to be adopted.

The operation was accomplished by making a rectangular palmar flap and removing the diseased bone. The wound was closed by silver wire sutures, and laudanum-and-water applied as a dressing.

DIFFUSED CEREBRAL SCLEROSIS.—In an article on this subject (*New York Medical Journal*, February, 1871, p. 129), Dr. Hammond says of its morbid anatomy that the most obvious feature detected by ordinary observation is the increased hardness and density which the cerebral tissue has acquired. This generally occupies a considerable portion of one lobe, or may extend through the whole of it, or may even affect a whole hemisphere. It is not distinctly circumscribed, but diminishes in intensity from the centre to the periphery, and, according to Pinel, never invades the gray substance.

The increased density is attended with atrophy when the disease affects the adult, and with atrophy and arrest of development when children are its subjects.

Diffused cerebral sclerosis consists in the hypertrophy or increased formation of the neuroglia or brain connective tissue, and the atrophy or disappearance of the proper nervous substance. Atrophy of the brain may, however, be due to other causes than sclerosis, as in the case reported with great minuteness by Schroeder van der Kolk, and several of those cited by Lallemand, Turner, and other writers.

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THE MEDICAL TIMES.
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EDITORIAL.

THE ABUSE OF MEDICAL CHARITIES.

THE English medical journals have recently contained much discussion upon this subject, which is no less appropriate to the state of affairs in the large cities of this country. In all of these, dispensaries have multiplied greatly during the past five years, over and above the wants of actual charity. Necessitated by the demands of the system of medical education heretofore adopted in America, they have been rendered the more indispensable in consequence of the recent extension of clinical facilities by all our first-class medical schools, to accommodate which, dispensaries previously existing in connection with them, have been greatly enlarged, while others have been added. Moreover, the increased disposition among medical men of this country to practise specialties has also resulted in additional demand for dispensary facilities, since in no other way can specialties be cultivated to the greatest advantage of those who practise them, either as regards the experience they require, or the reputation they justly seek. We do not wish to be considered as discouraging the extension of clinical facilities, or disparaging those who cultivate specialties; for, on the one hand, we consider the former absolutely essential to the proper education of students of medicine, and, on the other, are ourselves personally interested in special clinical work: so that we cannot be regarded as writing from a prejudiced standpoint.

At the same time, it will hardly be questioned that a constant association during the past ten years with extended dispensary and hospital service has enabled us to collect many facts which have a bearing upon this subject. These all tend to one important truth, that at least one-fourth of the persons thus applying for relief are amply able to pay for advice as well as medicine. Clearly such a state of affairs is improper; but what is the remedy? Shall clinical instruction be abolished and specialties be discouraged? By no means. Yet, while it is admitted that a remedy is not easily discovered, nothing is more certain than that it will never be found if we do not seek it. We therefore desire, if possible, to direct attention to the subject, and to suggest one or two means by which it is thought that the evil may be diminished, if not eradicated. They are wrestling with it abroad, and it becomes us also to look to it here, even though it be conceded, as we think it must, that complete success is impossible; for it is certain that, under any circumstances, aid will be gratuitously furnished to those who could afford to pay for it, while it is equally certain that many who deserve assistance do not obtain it.

We believe that the first step towards correction has already been taken in the efforts now being made to secure a closer union of medical school and hospital; for although bedside or true clinical teaching cannot be said to answer all the demands of clinical instruction, yet it covers so large a proportion that its extension must evidently diminish greatly the necessity for dispensary service. Three advantages will therefore arise from additional facilities of this kind. In the *first* place, a present defect is supplied; *secondly*, experience in this country has shown that there is much less probability of advantage being taken by undeserving patients, since they are less numerous among those who remain within the walls of a hospital; and in Great Britain also the difficulties are not nearly so great with intramural cases as with out-patients' departments and dispensaries; *thirdly*, since fewer dispensary cases are required, the colleges can afford to exercise greater rigidity, either in the exclusion of non-deserving cases, or in demanding compensation for their treatment, instead of holding them at a premium, as they are now almost compelled to do.

But it is asked, "How will this influence the so-called special dispensaries which are springing up around us?" The second alternative in the management of non-deserving cases at the college dispensaries suggests the answer. Certainly none of the young gentlemen connected with them are so firmly self-sacrificing as to *prefer* no compensation for their services if it can be obtained; and although it may be a source of pride to be a member of a profession which does so much for nothing, it must be remembered that there are other obligations than those to self, and that there are those who could not afford to give their services, indifferently, at least, without charge. Such must therefore be excluded from all opportunity to cultivate a specialty, whatever their merits. Moreover, there are none of us to whom it is impossible to meet the fate of the English physician alluded to in a late number of the *British Medical Journal*, who, in reply to a toast, "The Medical Charities of the City and their Officers," said, among other things, "I am proud to belong to a profession which does so much for nothing." This gentleman lived to become dependent upon the charity of his former patients and of his city brethren, though he was a man of cultivated tastes, fine wit, and genial heart.

The difficulty which at once presents itself with regard to such compensation, is the prevention of abuse which might naturally be expected to arise in some instances, if medical officers of charities were permitted to collect their own fees. But a different and only possible course would at once remove the chance of such abuse, and at the same time correct another evil, in support of which time alone can be adduced. This evil is "gratuitous service at hospitals." The laborer is no less worthy of his hire, even if circumstances are such that

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he is willing to labor without it; while it is somewhat singular that the most laborious of professions should be so largely uncompensated. Now, if the collections from such cases, instead of passing into the pockets of the physician, were thrown into the coffers of the charity, while the authorities of the latter paid the medical officer,—not, of course, in a princely manner, but to a degree which must remind him that his services are not altogether gratuitous,—both evils would be diminished, and much unthought-of advantage would accrue. It is to be regretted that the Philadelphia Dispensary, comparatively, at least, so wealthy an institution, should have taken a step backward in this respect, when abroad such men as Sir William Fergusson, Dr. Meadows, Mr. Charles F. J. Lord, Dr. Joseph Rogers, Dr. D. Campbell Black, of Glasgow, and others, are laboring to remedy what is now an acknowledged evil.

Dr. Rogers, writing to the *British Medical Journal* for May 27, says:

"It was not until I had been asked to second one of the resolutions at the late meeting in Berners Street that I was induced to look into the statistics of the subject, and then, to my astonishment, discovered that so vast a number as upwards of a million cases of disease were annually seen at these institutions. I state upwards of a million, because I have good reason to believe that a correct return would show even a much larger amount than the figures I quoted, this being (exclusive of the 200,000 cases of disease attended by the district medical officers) above a quarter of a million more than the total of all the cases attended by the 786 dispensary physicians in Ireland, where, it has been asserted, there exist great abuses of medical relief. To suppose for a moment that all this huge amount is made up of really necessitous persons is simply absurd; a careful investigation would probably eliminate three-fourths,—certainly one-half; it will therefore be evident that a very large sum of money is abstracted from the pockets of the profession."

Dr. Black, of Glasgow, writing to the same journal a week later, says:

"To convey some idea of the extent to which the pampering of the population with gratis advice is carried on in this city, take the following: There were treated at the Ophthalmic Institution, during the past year, 2054; at the Skin Dispensary, 1200; at the Eye Infirmary, 3449; at the Glasgow Maternity Hospital and Dispensary, 1060; at the Royal Infirmary, 23,438; at the University Lying-in Hospital Dispensary, 4000; at the Medical Mission Dispensary, 18,672; which makes the large sum total of 53,873 (one-tenth of the entire population). But be it observed that this number does not include the patients treated at the Ear Dispensary, the Dispensary for Diseases of the Chest, the Barony Parish Hospital, the Town's Hospital, nor the very large number treated out-door by the district medical officers. Is it, then, to be wondered—the profession of Glasgow being so redolent of the milk of human kindness—that there should exist such a precipitate downward competition, that the senior practitioners are compelled to take paltry fees, and that the juniors find it difficult to make a livelihood?"

These facts require no comment. Are matters widely different with us?

MEDICAL BENEVOLENT ASSOCIATIONS.

ONE of the most marked outgrowths of Christian charity in modern times is found in the development of various plans for aiding those who may falter or fall in the great race, or for taking care of those who are thus left without support. Among merchants, small tradesmen, and mechanics, these organizations are very general; they exist, also, to some extent among the clergy in various denominations. There are especial reasons why they should be formed by the members of the most charitable of all professions,—the medical.

It is very rare to find a man who has amassed even a competency by the practice of medicine. There are indeed many wealthy physicians, but they have generally become so either by inheritance, by marriage, or by transactions outside of their professional duties. A great many there are also who live by their practice, perhaps even handsomely, but who have laid up absolutely nothing towards the support of their families in the event of sickness or death. Nor is this always avoidable. The study of medicine is itself so costly, the expenditures necessarily incurred in practice are so great, and the money returns for some years so inadequate, that the embarrassments of early professional life are in many cases hardly shaken off before the energies begin to wane. Ill health does not always wait for old age, but is sometimes brought on by the very activity with which the labors and responsibilities of the profession are undertaken.

In this city alone, among the large body of practising physicians, we have ourselves been cognizant of many cases illustrating the truth of these statements; and we cannot but feel surprised that no plan for their relief has as yet found a place in the long list of charities to which our citizens point with so just a pride.

But three aid-societies of this kind, within our present knowledge, exist in this country: one in Boston—the "Massachusetts Medical Benevolent Society," established in 1857—and two in New York,—the "New York Society for the Relief of Widows and Orphans of Medical Men," founded in 1842, and the "New York Physicians' Mutual Aid Association," founded in 1868. London has three: the "Society for the Relief of Widows and Orphans of Medical Men," dating back to 1788, the "Medical Benevolent Fund," founded in 1836, and the "Royal Medical Benevolent College," founded in 1855.

In some of these societies the members are assessed in a certain sum upon the death of any one of their number. In others, the object is the formation of a fund for the temporary or permanent relief of the pecuniary distress either of needy medical men, or of the families of those who die poor. The latter mode seems to have the greatest capacity for good, and there are doubtless other features which might be added to this main idea, so as to develop a noble and comprehensive scheme of charity.

We most earnestly hope that, whatever the plan may be, a movement will be soon made, and strongly made, to develop, upon a sure basis, a "Philadelphia Medical Benevolent Fund," which shall embrace all the legitimate features of such an institution, and put us at least upon a par in this respect with our professional brethren in London, New York, and Boston. And we should

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be glad to see a system of such organizations all over the country, wherever the number of professional men in a given area is sufficient to sustain them.

But it must be remembered that such a movement will come with best grace from the affluent,—from those who are not themselves likely to need assistance. It should be a genuine outpouring of that charity which impels those who have been blessed by Providence with worldly goods to share the burdens of their less favored brethren.

CORRESPONDENCE.

DOUBLE MONSTERS.

To the Editor of the Medical Times.

YOUR issue of July 15 contains a letter from Dr. G. J. Fisher, who writes "to correct a few errors in regard to the number and character of the cases" of *Ischiopagus tripus*, cited in my clinical lecture on the Ohio twins (*Medical Times*, June 15).

In so far as Dr. Fisher has spent much time and labor in the study of double monsters, and has given to the profession an admirable essay upon them, his opinion on all matters regarding this subject is certainly entitled to great respect. Yet his communication to you is not altogether above criticism; and since he has courteously set me right on one point, it is but fair in me to serve him a like turn in a like spirit.

In my lecture I stated that "Dr. G. J. Fisher *details* four such cases" as the Ohio twins;—which is the fact, for he *describes* four only. But in the bibliography of the general subject of Ischiopagus (including the several varieties, such as *dipus*, *tripus*, etc.), which escaped my notice, he refers to the works of Ambrose Paré, Paris, 1575, p. 809. Independently of this reference, I also examined the works of Paré (Lyons, 1652), and, at page 652, found my "fifth case." Dr. F. ought undoubtedly to be credited with the work he has done, and I cheerfully resign to him all right and title to this "fifth case." At the same time, I really think, no "perplexity,"—which Dr. F. seems to fear,—but rather advantage, will result to future investigators from the fact that two persons have cited the same case from different editions of the same author.

Again, Dr. Fisher writes, "The *sixth* case referred to by Dr. Goodell, of which he says a wood-cut is given by Aldrovandus (*Monstrorum Historia*, Bononiæ, 1642, p. 646), is copied from a wood-cut in Lycosthenes (*Prodigiorum ac Ostentorum Chronicon, etc.*, Basileæ, 1557, p. 619). It is also copied by Licetus (*De Monstris*, 3d edition, Amsterdam, 1665, p. 113). I have translated a brief account of it, which will be found under Case 38 (p. 254 of Transactions), being one of the *four* cases which Dr. G. credits me with."

To this statement I can best reply by asking your readers to compare the following description of the two cases, taken, the one from Dr. Fisher's essay, the other from Aldrovandus:

"Case 38, Ischiopagus tripus," of Dr. Fisher's collection, is as follows: "Lycosthenes figures and describes a case of double malformation similar to the above cases, which, he says, was born near Oxford, in England, on the 3d August, 1552, only five years previous to the publication of his curious work on Prodigies. It is undoubtedly authentic, as it corresponds in every particular with modern cases. The sex was female. The case is copied and figured by Licetus." (*Trans. New York State Med. Soc.*, 1866, p. 254.) Per contra, my "sixth case" reads thus in Aldrovandus: "Finally, in the township of Pistoja [in Tuscany], March, 1610, the wife of a charcoal-maker gave birth to twins, which were so equally fused together in the region of the pudenda and nates, their heads being at opposite poles, that the sex could not be determined, although more likely female. Both these children, as far as the umbilicus, were perfect in all their members, and had but one anus in common. In addition, another passage in that region was observed, into which two foramina opened. One of these children had but one leg; although the hand of an intelligent surgeon could readily distinguish in it the bones of two legs. This rudimentary leg (*crusculum*) ended in two imperfect feet, supplied with only eight toes, as is shown in Fig. 3,—the wood-cut of this monster."* This figure represents a monster exactly similar to the Ohio twins, "with the single exception of the twist on its axis of the fused limb." In this same chapter Aldrovandus, it is true, describes and figures the Oxford monster, which he cites from Schenchius† and Rueffus.‡ He also describes another one, born in the same year at "Mildeltostoni in Anglia," but which, to my thinking, is identical with the Oxford monster, although Licetus (*loc. cit.*, p. 87) also gives it as a distinct case. But it seems hardly likely that two monsters of an extremely rare type should have been born in the same year and in the same small kingdom.

It appears, then, that my "sixth case" is not "one of the four cases,"—viz., "Case 38" of Dr. Fisher's collection. Moreover, as Lycosthenes died in 1561, it is manifestly an error to accuse Aldrovandus of borrowing from him the figure and history of a monster which was born in 1610,—forty-nine years after his death. Nor, for the same chronological reason, could Licetus have copied this case from Lycosthenes.

My "seventh case," born in 1845, is an undoubted one of *Ischiopagus tripus*, notwithstanding Dr. Fisher has "not seen an account of it in any of the numerous works which I (he) have consulted." Let me, however, assure him that it has not been copied from Lycosthenes, and that he can very safely "place it with the three-legged group." It will give me pleasure to send to him a copy of this detailed case, or in any other way to further the much-desired completion of his systematic essay on Diploteratology.

I come now, Mr. Editor, to my "eighth case,"—somewhat reluctantly, I admit; for who likes to eat humble-pie? Dr. Fisher has here the right so clearly on his side that I yield me, rescue or no rescue. This case turns out to be a monster of four, instead of three, legs; and for this additional leg—certainly far more welcome to the monster than to myself—I

* In my clinical lecture this wood-cut is incorrectly cited from page 646 of Aldrovandus' work, instead of page 649, as it should have been. Licetus (*De Monstris*, Amstelodami, 1665, lib. ii. cap. 10 and 22), after quoting from Riolanus and Rueffus—but not from Lycosthenes, as Dr. F. contends—the history of the double monster "born in England, near Oxford, in 1552," briefly alludes to my "sixth case," as follows: "His simile natum est monstrum Cutiliani, ditione Pistoriensi, anno Domini 1610, XI Martii, patre Majo carbonatio, matre Geneverâ Masi, ætatis XVI annorum."

† *Observationum Medicarum*, etc., Francofurti, 1609, p. 8.

‡ *De Conceptu et Generatione Hominis*, Francofurti, 1587, lib. v. cap. iii.

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ask your readers' pardon. In justice to the gentleman who gave me the reference, I am bound to say that he relied on his memory. But as for myself—well, as I cannot excuse my own carelessness, I shall not ask your readers to do so.

WILLIAM GOODELL, M.D.

PRESTON RETREAT, PHILADELPHIA, August 1, 1871.

TREATMENT OF GANGLION.

THE following, from the *British Medical Journal* for July 1, 8, and 22, 1871, are the methods of treatment of ganglion by some principal British surgeons:

"MR. WOOD passes a spear-pointed needle, cutting on both edges and mounted on a handle, into the cyst, and made to transfix it again and again so as to let out the synovial contents into the areolar tissues of the surrounding fascia. The needle is then made to scarify briskly the interior of the cyst, and is used pretty freely in dividing the cyst-wall, at its opening of communication with the sheath of the tendon. Pressure is then made with both thumbs upon the tumor, so as to squeeze out completely its contents, partly into the subcutaneous areolar tissue, and partly out through the opening in the skin by which the needle entered. Iodine paint is then applied thickly over the surface, and upon it a thick pad of lint, over which firm pressure is made by a bandage. This is kept on for several days, after which the iodine paint is again applied and the pressure readjusted. After a few applications in this way, the tumor seldom reappears, and, if it do so, a repetition of the process rarely fails to succeed. No case has been met with, out of many hundreds treated, in which suppuration or any bad results have followed this plan; but several cases in which a seton had been employed have given rise to much trouble and danger from erysipelatous inflammation and abscess, followed by stiffening, and, in some cases, permanent impairment of the use of the limb.

"MR. HENRY SMITH passes a single ligature-thread through the cyst, and allows it to remain according to circumstances. In some instances, severe inflammation, and even suppuration, will be produced in forty-eight hours, and then the thread is to be withdrawn. In the majority of instances, however, especially when patients are careful not to use their hand, the seton may be retained for a period varying from three days to a week without producing any inconvenient symptoms; but so soon as suppuration takes place, Mr. Smith withdraws the thread, and the cure is almost invariable. It is necessary to bear in mind in this treatment that, in some constitutions and under certain conditions, the presence of the seton may produce very severe consequences; in fact, this is the only objection to the treatment. With care this rarely occurs; and there has only been one instance among Mr. Smith's patients at the hospital where bad results did happen. This was in the case of an unhealthy man, who applied with a ganglion as large as a crown-piece on the back of the wrist. Mr. Smith passed a seton. The patient did not apply until four days after, and in the mean time most violent inflammation and suppuration occurred. Free incisions were necessary, and the wrist-joint itself was threatened for a time; but the use of a splint and careful treatment prevented any mischief. The patient, however, was compelled to remain under treatment for several weeks.

"SIR H. THOMPSON applies, for ordinary and recently-formed ganglia about the wrist, tincture of iodine for four or six weeks, usually with good effect. If they resist this, he passes carefully through the centre, with a sharp needle, a double thread of silk, ties the two ends in a knot, and squeezes the contents out of the needle-opening, and leaves the thread in for three days, applying water dressing. At the end of that time, if a purulent discharge be seen and a little inflammation have taken place, Sir Henry removes the thread and applies water dressing: as a rule there is no trouble with the ganglion. If little or no action be produced by the tiny seton, he leaves it in a day or two longer. Sir Henry has never had occasion to regret this, but once an out-patient at the hospital, who did not attend at the end of three days, returned a week after the operation with erysipelatous inflammation of the arm. She did badly, and got some permanent stiffness of the hand in consequence.

"MR. CHRISTOPHER HEATH endeavors to burst the cyst by pressure, and, failing this, punctures it with a grooved needle, and applies iodine paint for a few days.

"MR. HOWSE finds a certain number of cases not curable by any of the above methods when the cyst-wall is thick and not capable of being replaced, or where it is situated under dense fascia, as in the palm of the hand. These are, he thinks, best and most expeditiously treated by excision of the cyst in the antiseptic mode. The usual objection to this plan of treatment is the fear of diffuse inflammation supervening. The antiseptic method, however, entirely obviates this objection, and with it, he said, he has no fear of opening the sheaths of tendons even extensively.

"MR. CAMPBELL DE MORGAN (Middlesex Hospital) prefers to leave slight cases of ganglion alone. If troublesome on the back of the wrist, he fairly cuts through them subcutaneously, and keeps on pressure. The large ones on the palm of the hand, if he interferes at all, Mr. De Morgan lays open fully, saving the annular ligament, and dresses with some balsamic tincture. Enlargements of the bursa patellæ he treats with rest and iodine. If they be inflamed and suppurating, he lays them open. When they are indolent, he uses puncture and rest; sometimes setons, though Mr. De Morgan states that he has seen mischief from these. He has seen great good from blistering. Ganglia in the popliteal space he never touches, if he can help it. If it be necessary to interfere, the greatest care should be taken to preserve rest. Inflammation is often propagated to the joint from them.

"The mode of treatment which MR. GEORGE LAWSON (Middlesex Hospital) adopts for the small ganglia on the extensor tendons of the wrist is, first, to try if he can rupture them by firm pressure with his two thumbs while the hand is laid upon the table, and then, by steady rotatory rubbing, to cause the contents of the cyst to be extravasated into the adjacent cellular tissue. He then paints the part with a strong solution of iodine, and applies a firm pad and a bandage. When, however, the ganglion resists the pressure of the thumbs, and cannot in this way be ruptured, Mr. Lawson introduces a tenotomy-knife through the skin, at a short distance from the ganglion, and lays it freely open subcutaneously, and then, by pressure with the fingers, evacuates its contents into the surrounding tissues. The parts are then painted with iodine, and a pad and bandage applied as above stated. Mr. Lawson strongly deprecates the plan of using setons for the cure of ganglia, as on two occasions he has seen the hand nearly lost from diffuse cellulitis which followed this mode of treatment.

"MR. HENRY LEE'S (St. George's Hospital) plan of treating ganglia is to puncture them subcutaneously, and to press out their contents into the subcutaneous cellular tissue every day or two until it ceases to reaccumulate. Mr. Lee lately treated in this way, with success, a ganglion as large as a French walnut, on the instep, of many years' duration.

"MR. WALTER RIVINGTON (London Hospital) invariably punctures the swelling with a fine-pointed bistoury, squeezes out the fluid thoroughly, and then applies a compress tightly for a few days. Failure to cure is, in his experience, rare.

"MR. HOLTHOUSE'S (Westminster Hospital) most frequent method of proceeding in simple ganglia about the wrist is, first to flex the joint to the utmost, and make firm pressure on the tumor with the thumbs. Failing to get rid of it by this means, he passes a single thread through it, again makes pressure as before, and so empties it through the apertures made by the thread. The two ends of the thread are then tied together and a compress applied. In the course of one, two, three, or more days, according to the amount of inflammation set up, the thread is removed, the inflammation subsides, and the ganglion is cured. Mr. Holthouse never adopts this plan of treatment unless he can see the patient within twenty-four hours, lest inflammation of an unhealthy character or too violent should be set up. Failing this condition, he punctures the tumor with a tenotomy-knife, squeezes out the contents, applies a firm compress over it, and straps it tightly round a splint placed on the palmar aspect of the wrist. There is a variety of ganglion with the pathology of which Mr. Holthouse is not well acquainted. It appears suddenly,

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without obvious cause, and cannot be distinguished, either by its appearance or feel, from an ordinary ganglion. It differs from this, however, not only in the mode of its appearance, but in its not forming a perfectly-closed sac. Under pressure, it may be made to disappear completely, and without rupture of its walls: for this reason, Mr. Holthouse always first tries pressure and manipulation of the tumor before resorting to seton or puncture.

"Mr. W. Adams (Great Northern Hospital) thinks that, in the simplest form of ganglion, such as that frequently seen over the carpus, when recent, rupture of the sac by a sudden blow, or by hard pressure with the thumb, should first be tried, and will frequently succeed, even if it have to be repeated once or twice. This failing, he always resorts to a free subcutaneous section of the sac in different directions, by introducing a tenotomy-knife, and, after transfixing the sac, cutting freely in one direction, and then turning the knife, cutting as freely in the opposite direction. If the thin ganglionic sac appear to yield before the knife, the latter may be partially withdrawn, and the point made to pierce the sac in two or three situations. Firm pressure must afterwards be made by means of a piece of metal or small coin, wrapped round with lint, and kept in position by a bandage for a week. By this means he has generally succeeded in obliterating ganglia by one operation. Occasionally, however, failure occurs, and either the same operation may be repeated, or a seton may be introduced. In employing the seton, Mr. Adams always introduces six threads, and removes three on the following morning. This at once allows the fluid to escape, and relieves the inflammatory tension and pain produced by the seton. The remaining three threads may be allowed to remain for a week or more. From a neglect of this rule of removing half the seton, he once saw acute suppurative inflammation extend to the wrist-joint in a man under the care of the late Mr. Mackmurdo at St. Thomas' Hospital; and the patient died. The preparation, showing complete destruction of the articular cartilages of the carpal bones, is in the museum of St. Thomas' Hospital. Mr. Adams believes the seton to be a perfectly safe and reliable remedy, if half the silk be removed on the day following its introduction; but it may occasionally fail, and in two instances he has cured an obstinate ganglion by a second introduction of the seton. To what extent ganglion may be dissected out with safety he cannot say; but in one instance, mistaking the character of the tumor, Mr. Adams dissected out a large ganglion of a flattened and lobulated shape, which had formed over the extensor tendons as they cross the ankle-joint. He mistook it for a fatty tumor, such as he has seen in the forearm. On section, the ganglion was seen to be thick-walled and loculated; and, from its flattened and expanded form, he does not think a seton could have been employed. Metal sutures were used, and Dr. Richardson's colloid styptic with cotton-wool applied. Union by the first intention took place. Old thick-walled bursal tumors over the patella, we know, have frequently been removed with safety.

"Mr. Spence (Edinburgh Royal Infirmary) long since abandoned the old plan of bursting or breaking up the swelling by force; it almost uniformly failed to effect a cure. The cyst gave way at its weakest point, and the contents were diffused, and the tumor disappeared at the time; but the irritation produced seldom sufficed to obliterate the secreting cyst, and the swelling soon reappeared. Mr. Spence's general procedure in the smaller swellings (as at the wrist) is to use a strong double-edged needle (an old-fashioned cornea-needle), introduce it subcutaneously into the cyst, and move it freely about in all directions, so as to tear up the cyst as completely as possible; he next applies a firm compress over the part for a day or two, and then a fly-blister is applied. This method Mr. Spence finds sufficient in ordinary cases. In larger cysts, or where the contents are fluid (as in those connected with the hamstring tendons in the popliteal space), he draws off the contents with a trocar and canula, and injects tincture of iodine. This method rarely, if ever, fails in such cases; but it is not generally applicable, or rather very rarely applicable, to the ganglia at the wrist, the contents of which are too viscid to pass out by any canula of such a size as can be used in these smaller swellings. He has, however, used it successfully in a few cases. When the cyst is very dense, and its form and connections are tolerably well defined, Mr. Spence dissects the swelling out as a whole; or, if he find that its deeper attachments would involve much dissection, he removes as much as possible of the projecting portion of the cyst, and applies iodide or nitrate of silver on the remaining cystic surface. If the superficial incision be free, and undue manipulation be avoided, it is wonderful, Mr. Spence has observed, how little irritation follows, even in cases where we are obliged to leave a part of the cyst. In many cases the cyst is easily removed entire. He lately removed a large ganglion connected with the inner hamstring muscles from the popliteal space. It was of the size of a very large orange or small melon. He has not yet had time to examine its interior, but it was the largest he had yet seen.

"Mr. Annandale (Edinburgh Royal Infirmary) treats the simple ganglia met with over the dorsal aspect of the hand and foot by endeavoring to rupture them with the thumb; and, if this succeed, he applies a firm pad over the part for some days. If they will not rupture by external pressure, he opens the cyst subcutaneously with a fine tenotomy-knife, presses out the contents, and then applies a blister, followed by pressure with a pad. The ganglia containing seed-like bodies, usually occurring on the palmar surface of the wrist, Mr. Annandale treats by making a free incision into the sac, squeezing out all the contents, and dressing the wound carefully according to the antiseptic method. The chronic enlargement, with effusion of the bursal cysts over the patella, olecranon, and other bony prominences, he treats by a limited incision into the sac, and the introduction into the wound of a small piece of lint or other cloth soaked in carbolic oil, one part of the acid to ten of oil, which is removed at the end of twenty-four hours, the wound being then dressed with water or other simple dressing.

"Dr. Eben Watson (Glasgow Royal Infirmary), when the ganglion is small and cystic, as it is usually on the back of the wrist, practises subcutaneous section of the cyst, allowing the fluid to pass into the areolar tissue. Moderate pressure is then applied, to facilitate absorption, and, if this be slow, a blister may be used. In the more extensive cases, in which the sheaths of tendons are greatly dilated, as in the palm of the hand, he would pursue a similar treatment, and believes it would be successful. He once performed the free incision of the sheath and annular ligament, as recommended by Mr. Syme, but the patient nearly lost her life by reason of the violent inflammation of the areolar tissue of the whole arm which followed. If such a case presented itself to him now, and if subcutaneous section, in which he has great confidence, had failed, he would make one free incision above or below the annular ligament, and dress the wound carefully with spirituous solution of carbolic acid,—of course after emptying the sac. Dr. Watson's experience leads him to fear too much inflammation in the dilated sheath after operative interference, rather than too little; therefore he has not had occasion to use setons or iodine injections. He would rather not advise either of them.

"The treatment which Dr. Fiddes (Aberdeen Royal Infirmary) adopts with regard to ganglion on the wrist and hand is puncture with a grooved needle, pressing the fluid out of the sac, and afterwards applying constant pressure. Dr. Fiddes never saw any outward application, such as iodine paint, etc., do good."

Surgeon H. F. Patterson, of the Royal Artillery (*N. Y. Med. Jour.*, Aug. 1871), writes to the *Lancet* that he has for some time successfully treated cases of gonorrhœa with water only. He begins with injections of lukewarm water, and continues them hourly until chordee and scalding cease, and then uses cold water in the same way until the case is cured. He uses no internal treatment, unless an occasional saline aperient, and says he has not had a single failure.

Revaccination by Secondary Lymph.—As the result of some recent observations by Dr. J. B. Barbour (*Lancet*, July 29, 1871), Physician and Medical Superintendent of the Metropolitan Fever Hospital, Stockwell, it would seem proven—or better, in the author's words, "it is in the highest degree probable"—that revaccination by secondary lymph—that is, lymph taken from a vesicle produced by a secondary vaccination—does *not* protect from smallpox.

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REVIEWS AND BOOK NOTICES.

AN INTRODUCTION TO THE OSTEOLOGY OF MAMMALIA. By WILLIAM HENRY FLOWER, F.R.S., etc. London, Macmillan & Co., 1870.

The work before us consists of a series of lectures,—a reprint of the author's first discourses before the Royal College of Surgeons. Within the space of a 12mo volume of 329 pages in fair type, it may readily be seen, an exhaustive treatment of the subject is impossible. The plan of the author has been to present a general outline to the student. His style is clear and easy. Little attention is given to animal mechanics, nor is much said of the embryological basis of the mammalian skeleton,—opportunities lost, as we believe, to present the subject in its most attractive light. The analysis of the "hand" and "foot" fails to attract the author's attention beyond the identification of their component parts. We remember hearing a distinguished physicist remark of a certain class of zoologists that they reminded him of so many shopkeepers taking inventories,—*i.e.* collecting bare facts without caring to observe their relations. Mr. Flower, to judge from the present volume, has placed himself in a similar category among anatomists. He has taken an inventory of recent mammalian bones, and, having identified them with those in the human skeleton, has rested content. The student will find in this work a reliable guide, but will be disappointed should he expect in it a philosophical or suggestive treatment of the subject.

GUY'S HOSPITAL REPORTS. Edited by C. HILTON FAGGE, M.D., and ARTHUR E. DURHAM. Third Series, vol. xvi. 8vo, pp. xviii., 587. London, J. & A. Churchill, 1871.

This volume of these time-honored reports contains twenty-two articles, by seventeen members of the staff of the hospital. The papers are very far from being mere records of the practice of the house, although most of them are founded upon cases which have occurred within its purlieus; and we notice with pleasure the absence of those long treatises, upon subjects but remotely allied to medicine, which find a place in so many hospital reports. That so many men connected with the hospital can be induced to aid in the composition of the reports, shows of itself how high is the estimate of their value in England; and it is very gratifying to see the *esprit du corps* sufficiently strong to triumph over the heart-burnings and petty jealousies which so often exist and are so detrimental to concerted action.

Mr. Poland continues his exhaustive paper upon Subclavian Aneurism, considering in one hundred and thirty-two pages the various plans of treatment which have been adopted for the relief of this very serious affection. Should the conclusion of the work, which is promised for the next volume, be as valuable as the two parts already published, it will prove a most important contribution to surgical literature. At the same time, we regret that these papers should not be published in monograph form, as being so much more convenient for reference than distributed as they will be among three separate volumes; then, again, they form an elaborate treatise, in every respect worthy of separate publication, while they are rather out of place in their present position, being hardly records of the work done at Guy's. On page 25 an aneurism is spoken of as resembling a "poloni sausage." Who can tell us what that is? Can it possibly be Cockney for Bologna? though we can hardly suppose that Englishmen, who generally claim to be purists, would abuse the old Italian city by so translating its name.

Dr. Pye-Smith contributes a paper, illustrated by a plate, upon Retroperitoneal Hernia, and an article on Left-Handedness. In a note to the latter, on page 142, it is stated that the author has never known any one use the entire left half of the body in shooting, though he has met with several who use the left eye only. We have known several sportsmen whose practice entirely controverts this statement, and we happen to be intimately acquainted with one who always places the butt of his gun to the left shoulder, sights with the left eye, and pulls the trigger with the left forefinger.

The same author, in conjunction with Messrs. Howse and Davies-Colley, publishes some Notes on Abnormalities observed in the Dissecting-Room during the Sessions of 1868-69 and 1869-70, and a lithograph is given picturing a muscle running from the coracoid process to the under surface of the clavicle.

We have read with pleasure and profit a paper by Dr. Wilks on Adherent Pericardium as a Cause of Cardiac Disease, a circumstance shown to be of more frequent occurrence than is generally admitted. From his researches among the post-mortem records of Guy's, as well as from the results of his own experience, Dr. Wilks is almost inclined to offer the proposition "that in a well-marked case of disease with cardiac symptoms in young persons without any valvular bruit, pericardial adhesions may be fairly expected." There are two other articles upon diseases of the heart in this number, one of which is also by Dr. Wilks, and the remaining one is from the pen of Dr. Fagge.

The obstetric department of the hospital is represented by three contributions. The first is one by Dr. Hicks on an outbreak of diphtheria as it occurred in the obstetric wards. The disease made its appearance about a week after one of the patients had suffered from what appeared to be a mild attack of scarlatina, and only yielded to complete evacuation of the apartments infected. The second is a paper by Dr. Phillips recording eight cases of puerperal convulsions treated without bleeding. Chloroform was given in all, with the happiest results, as all made good recoveries. They were, however, of different degrees of severity, and are thought by the author of the article to be too few to establish the treatment; yet the marked success which accompanied the plan is certainly very encouraging. Dr. Phillips is also the author of a paper describing the delivery of a two-headed monster, the anatomy of which is given by Mr. B. N. Dalton and illustrated by two plates.

Dr. Moxon contributes an article on Syphilitic Disease of the Spinal Cord, and one on the Nature of Atheroma of the Arteries, each paper being accompanied by a plate showing the gross and microscopical appearances. Mr. Bader continues his Description of the Appearances of the Human Eye as seen by the Ophthalmoscope, this, the fifth series, showing the morbid appearances in inherited and contracted syphilis. The plates are the usual handsome chromo-lithographs. Mr. Hinton has papers upon the Treatment of Perforations of the Membrana Tympani and on the Relation between Chemical Decomposition and Nutrition. Dr. Wilks has a paper narrating some cases of General Paralysis, with a few remarks on Nerve-Pathology, which is interesting, as in fact are most of the articles by this author. Dr. Habershon contributes an article of great interest and value on Some Obscure Forms of Abdominal Disease, a subject he is so eminently fitted to discuss authoritatively; but the individuality of the cases is too marked to allow of our noticing them as a group, and space does not admit of an abstract of their details. Mr. Forster and Mr. Poland each contribute records of miscellaneous surgical cases, interesting in themselves; but we are impelled to treat them in the same manner as we have treated Dr. Habershon's paper, and for the same reason.

Mr. Birkett narrates a Case of Exostosis of the Frontal Bone growing into the Cranium, of very great surgical interest, both from its rarity and the careful manner in which it is told. It occurred in a girl fifteen years old, who had first noticed a swelling on the forehead twenty-two months, and some displacement of the eyeball about nine months, previously. Four months before she came into the house she had a fit, suddenly becoming unconscious, and her medical attendant at the time had lanced the tumor, which had become fluctuating, at the inner angle of the orbit. It discharged then, and continued to do so until her admission into the hospital, a tenacious mucoid material. The centre of the tumor corresponded to that of the left frontal sinus, and the case was supposed to be one of ivory exostosis growing from the wall of the sinus and obstructing the communication with the nose. After waiting some time to watch the progress of the disease, Mr. Birkett cut down upon the tumor, which had again become fluctuating from the healing of the lancet-wound, when, without dividing any osseous structure, it became at once evident that a frontal sinus had been opened, the cavity being

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filled with mucus, and its walls lined with mucous membrane. With the aid of a gorge and elevator, some small pieces of bone were removed, but nothing like a distinct ivory exostosis could be made out, and, as the posterior wall of the sinus was evidently the one being attacked, fear of opening the cranial cavity led the operator to desist from further efforts, after a vain attempt to pass a probe into the nasal cavity. The operation was followed by some constitutional disturbance and deep-seated paroxysmal pain in the forehead. These symptoms increased rapidly after the eleventh day, and death followed on the thirty-eighth day from the operation. At the autopsy an old abscess was found in the left anterior cerebral lobe, which was thought to account for the first attack of head-symptoms some months previously, and an abscess of recent formation existed in the right anterior lobe, which was regarded as the immediate cause of death. A bony tumor was found growing from the substance of the frontal bone, extending antero-posteriorly to the middle of the anterior fossa of the base of the skull, completely hiding the crista galli, involving the ethmoid bone, and extending transversely into either orbit. The diagnosis that the frontal swelling depended upon retained secretion proved correct; but Mr. Birkett was disappointed in the expectation of finding an ivory-like growth, as the whole tumor was composed of the lightest and most porous kind of bone. The author of the paper does not think that the operation hastened the death of the patient, and the facts appear to bear him out in his opinion, as the growth of bone was of itself quite sufficient to give rise to the abscess which caused her death, and there was no evidence that the cavity of the cranium had been opened by the attempt to remove the tumor. It was not a case, however, in which the uncertainty could cause much uneasiness, as death could not be far distant with such an amount of disease. The appearance of the girl before death, and the results of the post-mortem examination, are represented by lithographs, without a reference to which, we fear, our effort to give an intelligible abstract of the case will hardly be successful.

One of the editors, Mr. Durham, gives us the history of a case of immobility of the jaws consequent upon sloughing after fever, in which he obtained a very gratifying success by two operations,—a success which he thinks may very generally be attained in these cases by boldness of design and perseverance in execution on the part of the surgeon. The case, as Mr. Durham points out, was a very favorable one for surgical interference, the habits and constitution of the man being excellent, and his temper sufficiently tractable to aid the efforts of the surgeon. We agree with the opinion held by the author, that in these cases it is better to depend upon the separation of the cheeks from their substructures, and endeavor to stretch them over the gap, than to resort to transplantation of flaps, whenever this latter plan can be avoided. This paper also has its attendant plate, showing the man's appearance before and after operation.

The last article in the volume, equally interesting to physicians and to surgeons, is that by Dr. Steele, giving a statistical account of the patients treated during 1869. The mortality reached the high rate of 10.56 per cent, which is accounted for, in part, by the fact that, owing to some alterations in the arrangements of the wards, there were fewer surgical cases admitted into the house than usual. And it is well known that miscellaneous surgical cases tend to keep down the average mortality of general hospitals. Again, nearly fifty-six per cent. of the deaths occurred within a week of the admission of the patients into the house, which of itself points to the severe type of the cases applying for treatment within the hospital. Both pyæmia and erysipelas prevailed to a moderate degree, and all attempts to banish these surgical scourges by the use of various disinfectants were followed by but negative results. A large portion of the paper is occupied with a consideration of the method of nursing best adapted to the requirements of large hospitals. An explanation of the manner in which this important work is done at Guy's is given, with a review of the several plans in operation at the different large London hospitals. The whole subject is discussed in a thoughtful and instructive way; but to give our readers a clear account of Dr. Steele's views on this vexed question would require more space than will be occupied by this entire notice. Appended to Dr. Steele's remarks are the usual statistical tables, somewhat modified from those of former years.

It is a difficult task to notice in a general way a volume of so miscellaneous a character as the one before us, and we have merely selected for particular remark what is most interesting to us, though perhaps other readers would be most impressed with other papers. To use terms of commendation of a work so well and favorably known seems superfluous, and we will only add that we cannot speak too highly of the value of this volume regarded as a whole. Upon comparing it with the numbers which first issued, three times in a year, from Guy's Hospital thirty-five years since, adorned with the names of Cooper and Bright, of Addison and Key, with a host of other worthies, we feel that this serial, at least, has maintained its high reputation. We would recommend the perusal of this volume to all, and we know of no medical subscription which more fully compensates for the expenditure involved. That an index would materially add to the value of these reports is a remark that has been frequently made on this side of the Atlantic, and one which we heartily endorse, though we almost despair of influencing by any criticism of ours the London editors, who, we presume, hold themselves above American opinion. We have, however, some hopes that our English brethren, who have proved themselves cosmopolitan in the recognition and adoption of all practical advance in science, may add what their own common sense must approve.

DYNAMICS OF NERVE AND MUSCLE. By CHARLES BLAND RADCLIFFE, M.D., F.R.C.P., etc. 8vo, pp. 288. London, Macmillan & Co., 1871.

Starting out with the proposition that the key to the dynamics of nerve and muscle lies hid among the facts belonging to animal electricity, this volume is a learned disquisition on the electrical conditions of nerve and muscle, and the application of such conditions to account for the phenomena evinced by these organs. Based largely upon experimental research of a most laborious kind, the essay no doubt exhibits as accurately as is possible on such a subject the present state of our knowledge of animal electricity, the history of the discovery of which is well given in the first chapter.

Though Aldani, Galvani's nephew, published in 1803 some experiments which furnish further evidence of the existence of animal electricity, Nobili, in 1827, furnished the first unequivocal proof of the real existence of animal electricity, while MM. Matteucci and Du Bois-Reymond have left no room for entertaining any doubt as to its existence.

Since in the phenomena of this agent lies the *key* to the dynamics of nerve and muscle, the natural result of reasoning thus based is the adoption of the physical theory of life, or of what was formerly called life; for the term would now scarcely seem appropriate, since it was employed to indicate the presence of a set of phenomena called *vital*, to *distinguish* them from the *physical* phenomena with which they are now admitted by those reputed most learned to be identical. No other term has, however, been as yet suggested.

The author's position is early taken. Thus, in his Preface, p. xi, he says:

"For the rest, I must only say broadly that the general view of the dynamics of nerve and muscle proves to be in strict accordance with this partial view, and not with the view which assumes that muscle and nerve have a special life which expresses itself in contraction or sensation, as the case may be."

Again, in his Conclusions, p. 286, the author says that, "instead of regarding the state of action in nerve and muscle as a manifestation of vitality, there is indeed reason to believe that it must be brought under the dominion of physical law in order to be intelligible, and that a different meaning, also based upon pure physics, must be attached to the state of rest."

It would be impossible in the space permitted us to review a volume of this description, if indeed an essay made up, in part at least, of propositions followed by demonstrations of an experimental character, admits of review. Suffice it that the results of these demonstrations have their illustrations drawn from the physiology and pathology of the more ordinary as well as the extraordinary phenomena of life: the action of the blood in producing muscular motion; the action of nervous influence on muscles; the phenomena of rhythmical muscular

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action as elucidating the action of nerve and muscle; the nature of muscular action, the nature of rigor mortis, and the nature of nervous action. From a pathological point of view is considered muscular action as manifested in epilepsy and other forms of convulsion, common trembling and other forms of tremor, tetanus, and spasms; so also *sensation*, as exhibited in neuralgia and other forms of neuralgic disorder.

From a statement of the conclusions, however, may be inferred the importance of the subjects covered by the work of Dr. Radcliffe:

"There is reason to believe that all kinds of electricity act upon nerve and muscle by way of charge and discharge,—the charge antagonizing, the discharge permitting, the state of action.

"There is reason to believe that blood acts upon nerve and muscle, not by causing the state of action, but by antagonizing it.

"There is reason to believe that 'nervous influence' acts upon nerve and muscle, not by causing the state of action, but by antagonizing it.

"The whole case is simple enough. It would seem indeed —(1) That the sheaths of the fibres in nerve and muscle are capable of being charged like Leyden jars, and that during the state of rest they are so charged. (2) That the sheaths of the fibres in muscle are highly elastic. (3) That the fibres of muscle are elongated during the state of rest by the charge with which their sheaths are charged, the mutual attraction of the two opposite electricities disposed Leyden-jar-wise upon two surfaces of the sheaths, compressing the elastic substance of the sheaths, and so causing elongation of the fibre in proportion to the amount of the charge. (4) That the muscular fibres contract when the state of rest changes for that of action, because the charge which caused the state of elongation during rest is then discharged, and because this discharge leaves the fibres free to return, by virtue of their elasticity simply, from the state of elongation in which they had been previously kept by the charge, and that the degree of contraction is proportional to the degree of elongation previously existing. (5) That the fibres of nerve are not affected in the same way as fibres of muscle by the charge and discharge of electricity, because the sheaths of the fibres may be wanting in the requisite degree of elasticity. (6) That the blood antagonizes the state of action in nerve and muscle by helping to keep the natural electrical charge which antagonizes action. (7) That nervous influence antagonizes the state of action in nerve and muscle, by helping to keep up the natural electrical charge which antagonizes action. (8) Diminished efflux of blood to certain nerve-centres leads to excessive action in nerve and muscle, by disturbing the electric equilibrium of the nervous system which is maintained during the state of rest, this disturbance causing a partial reversal in the relative position of the two electricities with which the sheaths of the fibres are charged, and so necessitating the discharge which is the basis of the state of action; for, by this partial reversal, sheaths of which the charge has become negative at the sides and positive at the ends are brought into juxtaposition with sheaths of which the charge remains positive at the sides and negative at the ends,—are brought into a relation which necessitates discharge, for discharge must happen when opposite electricities come together." (Pp. 286–8.)

Many of these conclusions are sufficiently striking to excite the attention of those who are interested in the subject to the volume, by a careful study of which alone can it be determined whether the views held by the author are proven.

The unusually handsome manner in which the volume is issued by Macmillan & Co. invites attention; and, although the superficial reader may be disappointed in a comparison of the contents with its dress, for the thoughtful student it contains much to interest and incite to original investigation.

BOOKS AND PAMPHLETS RECEIVED.

Report of the Delegate of the Fulton County Medical Society, with the Report of its Committee. Also a History of the Controversy between the Old Board of Trustees and the Faculty of the Atlanta Medical College and the Fulton County Medical Society to the Time of its Introduction into the Georgia Medical Association. Also embracing the Actions of the Georgia Medical Society and the Macon Medical Association, with a History of the Controversy from its Introduction in the Georgia Medical Association to its Late Action at Americus, Ga. Also Dr. George G. Crawford's reply to an article, styled "A Statement of Facts," in the *Atlanta Medical and Surgical Journal* for May, 1871. Also Dr. E. J. Roach's Statements. Pamphlet, 12mo, pp. 102. Atlanta, Ga., Franklin Steam Printing-House, 1871.

A Review of Darwin's Theory of the Origin and Development of Man. By James B. Hunter, M.D. Reprinted from the *Journal of Psychological Medicine*, July, 1871. Pamphlet, 8vo, pp. 19. New York, D. Appleton & Co., 1871.

Minutes of the Twenty-Second Annual Meeting of the American Medical Association, held in the City of San Francisco, May 2d, 3d, 4th, 5th, 1871. Published by William B. Atkinson, M.D., Permanent Secretary, 1400 Pine Street, Philadelphia.

The Federal Government, its Officers and their Duties. By Ransom H. Gettel, formerly a Member of Congress from St. Lawrence County, N.Y. 12mo, pp. viii., 444. New York, Woolworth, Ainsworth & Co., 1871.

Restorative Medicine. An Harveian Annual Oration, delivered at the Royal College of Physicians, London, on June 21, 1871 (the 210th Anniversary). By Thomas King Chambers, M.D., etc. With Two Sequels. 16mo, pp. 85. Philadelphia, Henry C. Lea, 1871.

Practical Midwifery and Obstetrics (including Anæsthetics). By John Tanner, M.D., M.A., LL.D. With 115 Illustrations. 16mo, pp. 237. Philadelphia, J. B. Lippincott & Co., 1871.

Ninth Annual Announcement of the Philadelphia Dental College, Nos. 108 and 110 N. Tenth St. Philadelphia, 1871.

Third Annual Announcement of the Kansas City College of Physicians and Surgeons, Session 1871–72.

Address to the People by the Directors of the Pennsylvania Sanitorium. Pamphlet, 8vo, pp. 16. Philadelphia, Henry B. Ashmead, 1871.

Transactions of the Minnesota State Medical Society. St. Paul, Pioneer Printing Company, 1871.

On Bone-Setting (so called), and its Relation to the Treatment of Joints crippled by Injury, Rheumatism, Inflammation, etc. etc. By Wharton P. Hood, M.D., M.R.C.S. 12mo, pp. ix., 156. London and New York, Macmillan & Co, 1871.

On Some Disorders of the Nervous System in Childhood: being the Lumleian Lectures delivered at the Royal College of Physicians of London, in March, 1871. By Charles West, M.D. Philadelphia, Henry C. Lea, 1871.

GLEANINGS FROM OUR EXCHANGES.

A Case of Tænia Mediocanellata.—At a recent meeting of the Academy of Natural Sciences, Prof. Joseph Leidy made the following remarks on *Tænia mediocanellata*:

"Recently, one of our ablest and most respected practitioners of medicine submitted to my examination a tapeworm which had been discharged from a young man, after the use of the *Aspidium filix-mas*. The physician, in giving an account of the case, stated that he had previously treated the patient for another affection, in which raw-beef sandwiches had been prescribed for food. After looking at the worm, I remarked that it appeared to be the *Tænia mediocanellata*, a species which I had not before seen, and added that the patient had probably become infected from a larva swallowed with the raw-beef sandwiches. The specimen consisted of the greater part of the worm, broken into several pieces. Including some lost portions, it was estimated to have been upwards of thirty feet in length. Unfortunately, the head proved to be absent; but, so far as characters could be obtained from the specimen, in the form of the segments, position of the genital orifices, and the condition of the ovaries,

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it agreed with the description given of *T. mediocanellata*, rather than with *T. solium*. From a want of acquaintance with the former, I did not feel entirely satisfied that the specimen actually belonged to that species.

"Subsequently, my friend brought to me the anterior part of the body, probably, of the same individual tapeworm. He observed that, his patient continuing to complain, he had administered another dose of the male-fern, which was followed by the expulsion of the portion of the worm now presented. The head of the parasite was included, and it confirmed the view that it pertained to the *Tænia mediocanellata*.

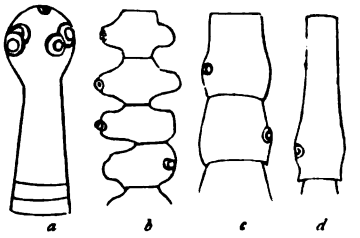
"The case serves as another caution against the use of raw flesh as food.

"The description of the worm, as derived from the specimen, is as follows:

"The head is white, without pigment-granules, obtusely rounded, unarmed with hooks, and unprovided with a rostellum, but furnished with a minute acetabuliform fovea at the summit. The four acetabula are spherical and opaque white. The diameter of the head is three-fourths of a line. The neck, or unsegmented portion of the body immediately succeeding the head, is about four lines long by half a line in breadth. The most anterior indistinctly-defined segments of the body, and those immediately succeeding them, but more distinctly separated, are about one-fifth of a line long by two-fifths of a line broad. In a more posterior fragment of the body, the flat and nearly square segments measure half a line long and a line broad, to one-third line long and 2½ lines broad. A succeeding fragment exhibits segments 3½ lines long by 4 lines broad, and 2 lines long by 5 lines broad. Many of the segments in this piece are irregularly separated, laterally, by deep, wide notches. In a succeeding long portion of the worm, the segments are wider behind than in front, and measure 2, 5, and 3 lines long by 5 lines broad. In a long piece of the posterior part of the worm, the segments are first 4 lines long and broad; and in the last four feet of the same piece the segments are clavate in outline, from 6 to 10 lines long, and 2 and 3 lines broad.

"The genital apertures are conspicuous, and are situated behind the middle of the segments. They alternate irregularly. Thus, in the last two feet of the posterior fragment of the worm, the first two segments exhibit the aperture on the left margin; the succeeding segment presents the anomaly of an aperture on both margins; then follow three apertures on the right, next two on the left, then four on the right, then eight alternating in pairs, then one on the left, and so on. The ovaries are opaque white, and exhibit numerous closely-crowded lateral branches.

"In the absence of pigment-granules to the head, and in the less robust character of the worm, the specimen differs from *T. mediocanellata* as described by Küchenmeister. The minute acetabular pit or fovea at the summit of the head is not mentioned by Küchenmeister and subsequent observers as a character of that species. It is a point, however, that might be readily overlooked, especially if the parts of the head are obscured by the presence of pigment granules.



"*a*. Head and neck magnified. *b*. Form of segments in an anterior fragment of the worm. *c*. Form of segments in an intermediate fragment of the body. *d*. Form of segments at the posterior part of the worm."

THEORY OF THE MODE OF ACTION OF DIGITALIS, AND THE INDICATIONS FOR ITS USE.—Dr. J. Milner Fothergill, in the Hastings Prize Essay (*British Medical Journal*, July 8, 1871), accepts unhesitatingly the theory announced by Dybkowsky and Pellikan abroad, and supported by Handfield Jones, Fuller, and others in England, that digitalis acts as a stimulus to the cardiac ganglia. The following are the conditions calling for its use:

"The patient complains of a feeling of anxiety about the præcordia, with a general unaccountable anxiousness,—a sense of difficulty of breathing, which is notably increased upon exertion; he has fluttering about the left breast amounting to palpitation upon effort or exercise; the pulse is irregular, or may be regular but compressible; then come a dusky complexion and impeded respiration. Here, then, is a condition of cardiac engorgement which would scarcely be disputed, whether as a passing condition or as one in a series of similar attacks. On examination of the case, there can usually be found a feeling of diffused impulse on palpitation, a large mass apparently being thrown into contact with the thoracic walls; percussion reveals an increased general dulness, frequently in the direction of the right side of the sternum. Auscultation communicates to us the further information that there is a short slapping sound, with or without irregularity, or, perhaps, evidence of laboriousness,—a heaving swell with obvious effort, which, however, is not followed as effect by that impression on the arteries we might look for; and, finally, there is a something beyond this, utterly undescribable by words,—a peculiar significant information conveyed, which experience and repeated observation alone can understand or interpret. Those who have made heart-disease a study will readily understand and supply that which I feel incompetent to convey. Or, in other circumstances, the patient has a tickling cough, feels short of breath on exertion, has a slight attack of bronchitis, or may-be no particular ailment; the pulse is small or feeble, but, on casually applying a stethoscope, there is found a state of cardiac excitement with some irregularity in time,—action like imperfect palpitation, but without any evidence on the radial pulse. It is nevertheless there, and percussion soon demonstrates that there is increased dulness to the right side of the sternum, and auscultation reveals corroborative information in adding a marked accentuation of the second sound at the pulmonary valves. The aggregation of sounds demonstrates that there is embarrassment and also laboriousness in the right ventricle; it is not likely to be accompanied by any effect on the radial pulse; and even the discriminating sphygmograph is thrown out, for there is no increased arterial tension anywhere where it can be applied. The trouble is going on in the right side; the diminished amount of blood passing into the left ventricle is insufficient to allow any impression to be made on the arteries, even if, as is very probable, the left ventricle is acting somewhat excitedly. From the number of fibres which belong equally to the right and left ventricles, and can be traced into each (see the works of Searle and Pettigrew), such community of action, even where there is no call on the left ventricle, is almost unavoidable."

NEPHROTOMY.—Dr. Meadows (*British Medical Journal*, July 8, 1871) performed the operation of nephrotomy on July 1, under rather peculiar circumstances. The operation was performed for the relief of a patient who presented the symptoms usually recognized as those of ovarian dropsy, but, on opening the abdomen, the tumor was found to be a large cyst of the kidney. The true structure of the organ had almost entirely disappeared, while the other kidney was apparently healthy. Dr. Meadows, in the belief that the removal of the diseased organ presented the best method of treatment, accordingly applied a ligature, as in the operation for the removal of ovarian tumor. The case proved fatal on the sixth day, from hemorrhage from the pedicle.

TOXIC ACTION OF QUINIA.—The following account of the effects produced by quinia, condensed from notes furnished by the patient herself, is from the *British Medical Journal*, April 8, 1871:

"My first recollection of taking quinine is that, when about sixteen, I was weak, and had medicine ordered. The first dose I took at bedtime. I passed a very restless night, and in the morning my whole head was swollen, and the face so altered that I could with great difficulty open my mouth to take food. The cause was unsuspected. Some time afterwards I took a glass of port wine from a wineglass in which medicine had been previously taken. But a very small quantity remained in the glass of the quinine solution; yet the

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same condition of swelling of the face, etc. came on, but not severely. Once again, when recovering from smallpox, I took some quinine, and had large wheals with local redness over neck, chest, and arms. All preparations of bark affect me more or less in this way."

TUBERCLE IN THE LEFT OPTIC THALAMUS.—Dr. L. Fleischmann reports (*Wiener Med. Wochensch.; Centralblatt*, April 8, 1871) the case of a boy, two years old, who up to three months before coming under observation had enjoyed good health. At that time, however, he was suddenly affected with trembling in the right hand; suffered from intense pain and loss of power in the right leg. The head was at first drawn to the right, afterwards towards the back. At the same time there was ptosis of the left eyelid, dilatation of the left pupil, and paralysis of the right facial nerve. The child often cried out during the night. The affected muscles on the right side at first contracted upon the application of electricity. Towards the close of life there were involuntary discharges from the bowels and bladder. At the autopsy, a cheesy mass, about the size of a chestnut, was found in the left optic thalamus and projecting into the left ventricle. The left crus cerebri was softened, and the fibres on its inner border were entirely destroyed.

CASE OF POISONING BY CHLORAL HYDRATE.—We find in the *British Medical Journal* for February 25, 1871, the record of another case of poisoning by this drug. The victim was a clergyman, æt. 51, who had been in the habit of using chloral in small quantities. The exact quantity taken the night before his death was not ascertained, but during the ten days which immediately preceded it he must have taken fourteen or fifteen drachms. At the autopsy a good deal of congestion of the cerebral membranes was found, together with some effusion of serum. The brain was pale, very soft, and friable. There was no increased vascularity in any part except the choroid plexus; no effusion in the ventricles, nor extravasation of blood.

ON THE USE OF CHLORAL HYDRATE.—In his lecture "On Experimental Medicine" (*Medical Press and Circular*, February 25, 1871) Dr. Richardson took occasion to refer to recent fatal cases from the use of hydrate of chloral. He said that now that its action is better understood, and the novelty all worn off, the employment of the hydrate by the profession is less common than it was some months ago, while the practice of resorting to it by the public is on the increase. As showing this increase, Dr. Richardson said that he had been able to estimate that nearly fifty tons of the agent had been used in England in the last eighteen months. He was inclined to think 120 grains a dangerous and 180 a fatal dose,—the former dose being as much as a healthy adult could decompose and eliminate in twenty-four hours. He, moreover, thought that chloral differed from opium in this important point, that the dose of the former cannot, like that of the latter, be gradually increased, except in the most limited degree, without immediate danger.

FORMATION OF BLOOD-CORPUSCLES.—Prof. Neumann, continuing his observations on this subject (*Quarterly Jour. Mic. Sci.*, July, 1871, from *Archiv der Heilkunde*, Bd. xii. p. 187, 1871), has observed colored nucleated cells, which he regards as transitional forms between the white and red corpuscles, in several instances in the blood of new-born children (born at full terms), and concludes that the embryonal formation of blood must go on till a later period than has generally been supposed,—certainly beyond the fifth month indicated by Paget. Further researches must show how long these embryonic forms survive after birth; they were found wanting in the case of a child who died at sixteen days. Kölliker had previously found them in the spleen and liver of new-born infants. Neumann has found the same embryonic type of blood-cell in the blood of two persons suffering from leukæmia.

OAKUM.—The use of oakum in surgery instead of lint (says *Good Health*)—highly appreciated in the recent Franco-German war by the German surgeons—is an American invention, the credit of which is due to Dr. Lewis A. Sayre, of New York.

MISCELLANY.

PROF. LONGET'S SEAT IN THE FRENCH ACADEMY OF SCIENCES.—The seat left vacant by the recent death of the eminent physiologist, Prof. Longet, was given by election to M. Lacaye-Duthiers, Professor of Natural History at the Museum.

THE APPLICATION OF MISS JEX BLAKE, recorded in the Miscellany of the last number of *The Medical Times*, has been denied, on legal grounds, by the Senatus of the University of Edinburgh, counsel having been consulted. The ladies are, therefore, not permitted to finish their education.

HONORS AND APPOINTMENTS.—The Société de Secours aux Blessés of France has forwarded the Cross and Diploma of the Society to Sir William Fergusson, Mr. Paget, and Mr. Ernest Hart.

Dr. E. G. Janeway has been appointed one of the Attending Physicians to Bellevue Hospital, New York City, to succeed Dr. T. G. Thomas, who resigned in May last.

Mr. Berkeley Hill, Mr. Christopher Heath, and Mr. Marcus Beck have been appointed teachers of Practical Surgery in University College Hospital.

Dr. Alfred Meadows has been elected Lecturer on Midwifery and Diseases of Women and Children to St. Mary's Hospital Medical School, having recently also been appointed Physician-Accoucheur to the Hospital.

Dr. Cayley has been appointed Physician to the London Fever Hospital.

Dr. John Murray has been appointed Assistant Physician to the Hospital for Sick Children, Great Ormond Street.

At the anniversary meeting of the Vienna Academy of Sciences, Mr. Darwin was elected an Honorary Fellow.

DIAGNOSIS AND PATHOLOGY OF OVARIAN DISEASE.—The eminent ovariotomist, Dr. Washington L. Atlee, of this city, is now engaged in the preparation of a work upon this subject. The manuscript will shortly be placed in the hands of the publisher, and the work will be issued as speedily as possible. It is the design of Dr. A. to follow this volume by one on Ovariotomy. The subject-matter of each volume will be garnered from the extended experience of the author, whose case-book contains, in detail, the record of over *nine hundred cases* of abdominal tumors, embracing *two hundred and forty* operations for the removal of diseased ovaria.

The simple record of such a vast experience will in itself be a valuable contribution to surgical science.

THE "CARDIFF GIANT."—The *American Journal of Arts and Sciences* for July has a short account of the hoax of the Cardiff Giant, which is yet humbugging the credulous. It appears that the image was carved from a block of gypsum quarried near Fort Dodge, Iowa. It was transported to Chicago, where the now notorious figure was created at the hands of a well-known marble-worker of that city. It was thence transported by rail to Newhall farm, near Syracuse, N.Y., and buried with great secrecy near the bed of a small stream. After seven months' interment it was "accidentally discovered,"—and we all know of its subsequent wanderings. It was exhibited in this city for a short time in 1869, but attracted little attention.

EXPLORATIONS BY THE COAST SURVEY BUREAU.—Prof. Agassiz, says the *American Naturalist*, has accepted an invitation to take passage in the iron Coast Survey steamer, which has just been built near Wilmington, Del., and which sails

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for the Pacific coast in September next. The expedition will take deep-sea soundings all the way. Secretary Boutwell has written to the Secretaries of State and Navy, asking that naval and other officers may be instructed to afford such courtesy and assistance to the exploring party as may be desirable.

Count Courtales, Rev. Dr. Hill, and Dr. W. White, of Philadelphia, will accompany the expedition.

CATTLE-TICK IN THE HUMAN EAR.—A young man, says the *American Naturalist*, late a resident of New Mexico, applied to Dr. Boucher, of Iowa City, suffering from inflammation of the external auditory meatus, which had persisted for four months. Dr. B., after careful examination, successfully removed a live specimen of the cattle-tick (*Ixodes bovis*), which had evidently effected entrance into the canal while the sufferer was sleeping in the open air, as had been his habit while residing in New Mexico.

COBRA POISON.—The rapidity with which the poison of the cobra di capello affects the system is well shown in the instructive experiment of Dr. Fayrer, as detailed by Mr. Sceva in the Proceedings of the Boston Natural History Society, January, 1871. An inguinal fold of the skin of a dog was held by two pairs of long-bladed forceps in such a manner as to include a triangular piece about three inches in length. The cobra fangs were applied to the middle of the free edge, and with a sharp scalpel, held in readiness, the fold of skin was at once cut out, and yet the dog died from the effects of the poison in fifteen minutes. The very short time during which the cobra's fangs were inserted into the tissues was sufficient to allow the poison to be sent through the circulation beyond the reach of the incision!

THE SYME TESTIMONIAL.—Contributors in this city to the Syme Testimonial will be glad to learn (*Lancet*, August 5, 1871) that the handsome sum of £2295 10*s*. has been collected for the foundation of a memorial of the late Mr. Syme. Of this sum, Mr. Syme's son has contributed £305. The committee of the memorial fund are thus enabled to present a marble bust of Mr. Syme, by Mr. Brodie, to the University of Edinburgh and to the Royal Infirmary, and to hand £2000 to the former institution. By an arrangement with the Association for the better endowment of the University of Edinburgh, this sum has been augmented to £2500, for the foundation of a Syme Surgical Fellowship, tenable for two years, and which will be awarded by the Senatus to a Bachelor of Medicine of not more than three years' standing who shall present the best thesis on a surgical subject,—the first competition to take place in 1874.

JOHN HUNTER.—In the *Times* of October, 1866 (*Brit. Med. Jour.*, July 22, 1871), appeared an interesting account of Old Kensington Church and the historical personages connected with it and the parish. Conspicuous among these was John Hunter, who for nearly thirty years labored diligently on his own freehold at Kensington; here, in fact, he worked out those principles which immortalized him. The house, grounds, dens, etc. at Earl's Court remain but little changed since his day, but the lease of the property is wellnigh expired, and in a short time these interesting acres will be built over, and then will be lost all trace of the home of the sagacious founder of scientific surgery. Under these circumstances, it has been proposed to commemorate John Hunter's long and useful residence in Kensington by placing a window in the magnificent new church, now nearly completed by Gilbert Scott, R.A., and thus associate this great benefactor of the human race with Newton, Addison, and others whose memory will be there represented.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending Aug. 12.	Aug. 19.
Abscess	5	0
Asphyxia	2	1
Abdominal Organs (diseases of)	93	84
Brain and Nervous System (diseases of)	54	46
Burns and Scalds	1	2
Cancer	6	2
Casualties	5	5
Circulatory System (diseases of)	7	9
Consumption	42	43
Other Diseases of Respiratory Organs	16	16
Debility	15	17
Diabetes	0	1
Drowned	5	5
Fracture of Skull	1	0
Intemperance	0	4
Marasmus	24	23
Puerperal Convulsions	1	0
Old Age	8	17
Rheumatism	1	0
Stillborn	18	15
Structure of Œsophagus	1	0
Scrofula	1	1
Sunstroke	1	1
Syphilis	0	1
Unknown	2	2
Unclassifiable	10	20
Zymotic Diseases	20	45
Totals	339	360
Adults	123	169
Minors	216	191

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM AUGUST 5, 1871, TO AUGUST 18, 1871, INCLUSIVE.

MILLS, MADISON, SURGEON.—By S. O. 165, Headquarters Department of the East, August 4, 1871, granted leave of absence for 30 days.

CAMPBELL, JOHN, SURGEON.—By S. O. 309, Headquarters of the Army, A. G. O., August 10, 1871, leave of absence extended 40 days.

WRIGHT, JOSEPH P., SURGEON.—By S. O. 172, Headquarters Department of Dakota, July 31, 1871, granted leave of absence for 30 days.

TOWN, F. L., SURGEON.—By S. O. 172, Headquarters Department of the East, assigned to duty as Post-Surgeon at Fort Preble, Maine.

GIBSON, JOSEPH R., ASSISTANT-SURGEON.—By S. O. 304, A. G. O., August 5, 1871, leave of absence extended 3 months.

COWLES, EDW., ASSISTANT-SURGEON.—By S. O. 172, Headquarters Department of the East, authorized to avail himself of leave of absence granted in S. O. 224, A. G. O., current series.

BUCHANAN, W. F., ASSISTANT-SURGEON.—By S. O. 167, Headquarters Department of the East, August 7, 1871, directed to comply with orders assigning him to duty at Fort Hamilton, N.Y.H.

MIDDLETON, P., ASSISTANT-SURGEON.—By S. O. 171, C. S., Department of the South, upon being relieved by Assistant-Surgeon Pope, to proceed to Lexington, Ky., for duty at that post.

MCELDERRY, H., ASSISTANT-SURGEON.—By S. O. 308, War Department, A. G. O., August 10, 1871, relieved from duty in Department of Texas, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon-General.

MILLER, G. MCC., ASSISTANT-SURGEON.—By S. O. 171, Headquarters Department of the South, August 11, 1871, directed to proceed to St Augustine, Fla., for duty at that Post.

AZPELL, THOMAS F., ASSISTANT-SURGEON.—By S. O. 148, Headquarters Department of California, August 3, 1871, assigned to duty as Post-Surgeon at Camp Halleck, Nevada.

POPE, B. F., ASSISTANT-SURGEON.—By S. O. 171, Headquarters Department of the South, August 11, 1871, assigned to duty at Elizabethtown, Ky.

DELANY, A., ASSISTANT-SURGEON.—By S. O. 92, Headquarters District of New Mexico, July 31, 1871, assigned to temporary duty at Fort Union, N.M.

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FRIDAY, SEPTEMBER 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SPURIOUS OR "PHANTOM" TUMORS OF THE ABDOMEN.

Delivered at the Pennsylvania Hospital in January, 1871.

BY J. M. DA COSTA, M.D.,

One of the Attending Physicians to the Hospital.

GENTLEMEN: There have been lately some cases in the ward which have caused us to discuss several of the more obscure diseases of the abdomen, and especially those connected with palpable swellings.

Now, this whole subject of abdominal tumors is one of the most difficult and puzzling in medicine. Each case is, or ought to be, an object of study in itself, and often has to be judged by the circumstances peculiar to it. Then, to complicate matters, some tumors are not the result of morbid growths or enlargements, but arise from dislocation of viscera in the yielding cavity in which they are placed; or, again, there are swellings due to, or at least favored by, irregularities in shape of the walls and of the elastic and readily-distended structures which enter so largely into the composition of the contents of the abdomen; tumors, therefore, which, if we can designate them as tumors at all, are not such in the ordinary acceptance of the term. To this group belong those strange spurious swellings that have been called "phantom" tumors, which require much care and some skill to discriminate, and which, while they have perplexed more than one observer, receive but very unwilling attention from most. The case before you belongs to this group, and in examining it I shall take occasion to investigate the whole subject. But first let me recall the features of this case, which you have seen before.

Eugene L., twenty-eight years of age, was admitted into this hospital on January 10 in a state of unconsciousness, from which he recovered with blindness, almost total, of both eyes, and which only slowly passed away. The cerebral symptoms made the case a very instructive one; but they need not be explained here, as the patient was before the class on a former occasion. What concerns us now more particularly is that, on the 18th, a well-marked prominence of the epigastric region was observed, especially noticeable at its lower portion, and giving the impression of a large solid tumor. Yet the swelling was clear on percussion, and on slapping it smartly the abdominal muscles contracted, and this movement caused the tumefaction nearly to disappear, to return again almost instantly when the muscles relaxed. On applying a strong faradaic current with wet electrodes, the muscular contraction rendered the belly scaphoid and wholly obliterated the tumor, which, however, would reappear as before. The digestion of the man was fair; there was certainly no marked dyspepsia. He knew very little about the swelling, but thought it existed before his attack of unconsciousness. He is now (January 24) about leaving the hospital; and though the swelling has lessened, it still exists, and may be made to disappear in the same manner as mentioned.

Now, here is an instance in which the swelling occupied the epigastric region. So it did in the following case, which I saw not long since with Dr. Hunt in this hospital:

Corn. F., eighteen years of age, single, was admitted into the hospital, October 8, 1870, with the request that she might be operated on for an abdominal tumor. The girl was in the habit of carrying excessive weights. She had a hysterical look, and confessed to being addicted to self-abuse. She presented a circumscribed, smooth, firm but elastic swelling occupying the middle of the abdomen, and extending from the ensiform cartilage to below the umbilicus. She had had this tumor for many months, and about three or four months prior to admission an operation was attempted for its removal, which, however, was abandoned "upon the escape of gas;" and one of the surgeons present, it was stated, supposed that the stomach had been perforated. A broad red cicatrix, near the median line, and about three inches in length, indicated the point selected for the operation.

Within a day or two after her admission into the hospital, a tube was passed into the stomach, and the point of it could be distinctly felt through the abdominal walls, directly under the external scar. Some gas escaped at the time, the tumor decreased, and an hour or two afterwards the swelling still seemed smaller, as Cornelia herself thought. The same morning she was thoroughly etherized by the Resident Physician, Dr. Van Harlingen, and the tumor entirely disappeared, leaving the contour of the abdomen normal, excepting where a deep fold of the walls over the former location of the swelling gave it an unnatural look. The abdomen retained its flaccid appearance for some hours after the etherization, and it was several days before the tumefaction regained its previous size.

The patient, who was somewhat constipated, was ordered Congress water; also a daily shower-bath; and some bitter tonic was prescribed. Subsequently she passed into Dr. Morton's hands, who, on taking charge of the ward, directed the continued use of a corset made for the purpose of giving support to the abdominal walls at the point of trouble. On the 29th of November she left the hospital, at her own request.

But you must not suppose that it is only in or near the epigastric region that we meet with these tumors. They are encountered at every part of the abdomen, and, to a considerable extent in accordance with their site, their size and shape will vary; and these changes render them likely to be mistaken for an entirely different set of maladies. Let me, by way of illustration, bring to your notice a case which was under my charge in this hospital two years since:

Mary D., thirty-five years of age, sent to my ward on the 5th of January, 1869. She stated that she had been in the hospital eight years before on account of dropsy, and that about ten weeks prior to her present admission she had noticed swelling of the face and feet; within the last two months there had also been a swelling of the abdomen, of varying dimensions, or, in her own language, one which "comes and goes." The menstrual functions were irregular; her feet remained swollen some days after she had been in the hospital. The urine was found to contain a small quantity of albumen; there was no disease either of the heart or the liver; the bowels were constipated. The abdomen was 32½ inches in circumference, but no ascites existed. At the lower part of the prominent belly, and extending to the flanks, was a tumor of irregular outline, everywhere tympanitic on percussion excepting just above the umbilicus, where there was some dulness with resistance and soreness to the touch. Contraction of the recti muscles caused a deep groove through the centre of the tumor in the line of the muscles; at the same time the sides of the swelling bulged and became somewhat tenser. The outline of the waist suggested tight lacing, the lower part of the thorax being much compressed. Under the administration of ether the tumor disappeared, but as the effects of the anæsthetic passed off the irregular swelling reappeared. Strong pressure, too, temporarily dispersed it; and the patient said that, while it was always most marked after dinner, it had at times been almost absent.

On several examinations it was noticed that the percussion resonance was of clearer, fuller tympanitic character over the swelling than over the surrounding parts. The skin over the tumor was movable; its outline was so irregular as to throw doubt on the idea of persistent muscular contraction.

By the 19th the tumor had gone, and the abdominal walls were exceedingly flaccid. The ridge of the median line was well marked, but there was no puffing up; neither was there projection of the umbilicus,—indeed, this had never existed. The chief treatment consisted in laxatives, nux vomica, good

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food, and occasional diuretics. No large masses of fecal matter passed at any time.

Now, when you look at the general features of the cases I have just spoken of, you will see that they are not dissimilar, yet how very readily in any of them doubt and confusion may have arisen. To place the matter in a clear light before you, I shall discuss the means of diagnosis on which I depend, partly such as have been already mentioned in examining the patients I have brought to your attention, partly others, which I have noticed more especially in cases I have seen, and which it is not necessary to detail.

First, the shape of the tumor is peculiar; it is apt to be irregular,—sometimes very much so,—and it is prone to change. Indeed, almost the whole prominence may shift its position. It is rarely sensitive, though, as in the case just reported, it may be so. Here and there a spot may be dull on percussion and resistant, but the mass of the swelling is always tympanitic, and more or less yielding. Strong pressure influences it greatly, —may indeed cause it to disappear; and so at times will a sudden blow. I have also known the tumor to vanish under the hypodermic use of atropia.

The effect of galvanism on the anomalous swelling is very striking. Faradization with wet electrodes, one placed over the tumefaction, the other near it, always produces a decided alteration in its shape and position, and may indeed obliterate it. The constant current has, I think, the same influence, but I have not tested this thoroughly.

But the readiest and most significant change is produced by the use of anæsthetics. Not in a single instance have I found these apparent tumors remain when the patient is under the influence of ether or chloroform, though they reappear, and quickly, when he passes from under that influence. I first used ether in a case which had been considered one of ovarian disease, occurring in a hysterical widow, and of which you will find an abstract in some clinical notes published in 1865 in the *Medical and Surgical Reporter;* and I have since employed ether so often that I speak with confidence of its value. Through it or chloroform, I think, we can control the diagnosis of these phantom tumors, which thus become ailments that no longer deceive us; and the same may be said of all those muscular contractions or tense states of the abdomen which are not unfrequently feigned, and which a high authority on such subjects declares "a source of difficulty almost impossible to get over." (Gavin on Feigned Diseases.)

I have thus laid before you the means to which I have learned to trust in the recognition of these spurious tumors. But it is also useful to know with what disorders you will be most likely to confound them. Not to speak of such solid tumors as those of the spleen, liver, or omentum, for which, with a little care, you can scarcely mistake them, I will call your attention to morbid conditions where error is much more apt to creep in.

The first of these is *enlargement of the stomach*. Now, when I come to say a few words on the probable pathology of these phantom tumors, you will see that it is likely that a certain amount of distention of the hollow viscera takes place, and, in consequence of the similarity of condition, similarity of symptoms may well happen. But in enlargement of the stomach, the soft, elastic, and, for the most part, markedly tympanitic swelling is connected with chronic gastritis or a narrowing of the pylorus, or it has followed some severe illness, such as typhus or puerperal fever, in which the coats of the stomach have been paralyzed; and in any case the nausea, the vomiting of frothy matter, the sour eructations, the epigastric pain,—in one word, the signs of marked gastric disorder,—are very different from the comparatively slight dyspepsia which may or may not attend the spurious tumor. Then, the sound of splashing which shaking a patient with a dilated stomach occasions, and, if necessary, the introduction of a bougie, will throw light on a doubtful case; and anæsthetics, too, give different results.

Fecal accumulations have this in common with a phantom tumor, that they may be transient, or, if persistent, exhibit a certain amount of movement and change in size. Yet they are more apt to remain unaltered than the spurious swelling, and if associated with dilatation of the colon, which, when of any standing, they are likely to be, there are usually several tumors present, generally occupying the middle third of the abdomen. You might suppose that the existence of constipation would assist you in the diagnosis; but constipation is not always a symptom of fecal accumulations,—nay, diarrhœa is not uncommonly met with; and, on the other hand, in phantom tumors constipation is often encountered. The tympanitic note elicited over these is valuable as a means of distinction, though this too may be modified and some dulness be present at particular points of the swelling; but, as a general rule, it is a highly important means of distinction, and so is the unchanged character of a fecal tumor when anæsthetics have been administered.

The stress I have just laid on the tympanitic sound over the prominent mass cannot be laid when we come to regard the differential diagnosis of a *floating kidney*, for here the sound, too, is tympanitic, excepting on very strong percussion; but the importance to be attached to the results of ether or chloroform is the same. Then the marked mobility of the displaced organ, and the fact that it has generally become dislocated after some violent effort, are points in the case which decidedly aid us.

Tumors in the abdominal parietes—such tumors as result from morbid growths or from inflammatory indurations or abscesses—are distinguished by the dulness on percussion over them, by the sense of resistance they afford, by their being uninfluenced by pressure, and much more distinctly moved by the act of inspiration.

Another class of cases liable to be confounded with phantom tumors are *diseases of the ovaries;* and, as you are probably aware, attempts at removing the ovarian growth have been made where such growth existed only in the imagination of the operator. Mr. Lizars, in his work on "Tumors of the Ovary," records an instance which, speaking in a general way, belongs to the group of spurious swellings now under consideration; and Dr. Bright, in his classical memoir on abdominal tumors, describes a case of what he calls hysterical distention of the bowels, that, when he saw it, still had an unhealed scar, about three inches in length; and I know of two instances in which the operation was planned, though fortunately not attempted. In one of the cases I have detailed to you in this lecture, an operation was performed, though the tumor was not supposed to be ovarian.

Lastly, these spurious tumors may be confounded with *pregnancy*, and the more easily are they confounded in fat persons. But into this question I shall not fully enter. Yet I will call your attention to a few striking instances.

Perhaps some of you, in the course of your reading, may have encountered allusions to Joanna Southcott, a virgin who at more than sixty years of age declared herself to be pregnant by supernatural means. She duped many physicians; and when she died there was no tumor, merely a thick, very fatty omentum and much distention of the bowels. She is stated always to have eaten large quantities of improper food, and to have possessed the faculty of producing quick contractions of the abdominal muscles. It has generally been supposed that the circumscribed tumor was a distended

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bladder; but I think we may recognize in the case of this self-styled prophetess all the elements necessary for the production of a phantom tumor. She lived before the days of anæsthetics, or the imposition would have been readily detected.

In an instance which Sir James Simpson describes (Clinical Lectures on the Diseases of Women), and, I believe, the first in which chloroform was used to assist in the diagnosis of pregnancy, the woman had a perfect mania to be considered pregnant, and had impressed her family with the correctness of her statement. Under chloroform the abdominal walls collapsed, and when she subsequently still insisted on the truth of the story, she was met with the indignant reply of her sister: "Haud your tongue, woman! You've naething in your wame, for I felt your backbane mysel' with my ain hand!" And the sister evidently spoke the truth; she made an observation which you will find true in the majority of instances of all kinds of phantom tumors.

Now, what of the pathology of these strange swellings? From the cases I have mentioned to you, and the observations I have made on them, you will have anticipated what I am about to say of their nature. You will probably believe with me—for in so changeable a disorder actual demonstration can scarcely be made—that the chief element in their production is partial contraction of the abdominal walls, particularly of the recti muscles, with more or less tympanitic distention of either the stomach or the intestine. Then a certain amount of constipation, and a large quantity of subcutaneous fat or of fat in the omentum, will modify some of the phenomena; for I do not think that all cases are precisely alike, or can be explained according to an exact formula. The frequent occurrence of these phantom tumors in hysterical persons is also to be taken into account; and the coexistence with hysteria may show itself in fits of hysterics, in convulsions, or in hysterical palsy. But do not fall into the mistake of supposing any necessary connection. I have met with these tumors in men who were not very impressionable. One man, indeed, who, after the nature of the swelling had been explained to him, and the fact that it was not dangerous stated, objected to anything being done to remove it, and took rather a pride in the fulness it imparted to his figure; very much, I suppose, in the same spirit in which Falstaff vaunts himself to the Lord Chief Justice: "I am the fellow with the great belly."

A few words in conclusion as to the treatment of these spurious swellings. You can understand at once how laxatives, belladonna, iron, and the bitter tonics will prove serviceable; how at times carminatives and antispasmodics may be resorted to; and how the local use of frictions and of galvanism, or how a bandage, is productive of good. But the chief treatment is apt to become the mental treatment. Impress on the patient's mind that you know exactly what the trouble is; prove to him that it is not serious and that you are not deceived by it, and you have made a long stride in your therapeutics. In truth, you can scarcely refer to a disorder in which an accurate diagnosis is of more direct immediate good; it goes a great way in itself towards effecting a cure, and it prevents the adoption of means which may be useless, ridiculous,—nay, dangerous. But to arrive at that diagnosis you must exert in every case care and skill; do not rest satisfied until you have thought of every possible point. Most applicable is here what one of the ablest physicians, as well as most elegant writers, of our day, Sir Thomas Watson, says in general of abdominal tumors: "Your sagacity will be abundantly tried in balancing the evidences of different symptoms in these obscure yet palpable forms of disease; and, after all, you will often doubt; and often when you do not doubt you will mistake." Knowing how true is this remark, I have in this lecture endeavored to show you where doubt comes in, why it must come in, and how it is to be met and removed.

ORIGINAL COMMUNICATIONS.

AUSPITZ ON THE ABSORPTION OF INSOLUBLE MATTER IN MAMMALS.

AN ABSTRACT.

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A MOST interesting paper,* containing a number of physiological experiments, has just been given to the profession by Dr. Auspitz, of Vienna. Dr. A., formerly Prof. Hebra's assistant, and well known as a dermatologist and syphilographer, has devoted much time to research and experiment; while the thoroughness with which all his investigations have been carried out renders them exceedingly valuable. The experiments upon which the article under consideration is based were made during the past six months in Prof. Stricker's laboratory, and with the assistance of that careful experimenter and physiologist. Feeling confident that researches of this nature—some of which bear so intimately upon therapeutics—must be of interest to the profession in our own country, I have made the following short résumé:

Experiments for the purpose of determining the absorption of insoluble matter have heretofore been conducted chiefly in three directions, one question being whether, and, if so, in what way insoluble matter reaches the lymphatic system and so the blood, supposing it to start from the intestine. On other occasions the integument of the body has been chosen as the seat of experiment; and finally, of late, several physiologists have experimented upon the large cavities of the body, including the peritoneal sac and pleural cavity. Before taking up the consideration of the present investigations, it will be worth while to glance briefly at the results of some previous experiments. In regard to absorption from the intestinal canal, it is well known that fluids and fat-particles easily force their way through the walls of the intestine. With reference, however, to the penetration of finely-divided solid matter from the intestine into the circulation, numerous experiments with various substances upon frogs, rabbits, dogs, cats, and guinea-pigs have been reported, and, as we shall see, with various results. Thus, Oesterlen† gave cats mercurial ointment to eat, and reported that he found mercury in the blood. Herbst‡ asserted that he had proved the passage of milk-globules and starch-granules into the lymphatic and blood vessels, by means of a number of experiments, an assertion which Bruch§ also confirmed by his experiments upon the mesenteric veins of sucking cats and dogs. Donders and Mesonides‖ mixed powdered charcoal with the food of rabbits, and found in every drop of blood examined, no matter whence taken, small granules of charcoal. Thin sections of dried lung from rabbits treated as above mentioned, showed particles of charcoal in abundance. A mixture

* Ueber die Resorption ungelöster Stoffe bei Säugethieren, von Heinrich Auspitz in Wien (separatabdruck aus den Wiener Medizinischen Jahrbüchern, N. F. III.), Wien, 1871.

† Archiv für physiol. Heilkunde, 1843.

‡ Das Lymphgefäss-System und seine Verrichtungen, 1844.

§ Kölliker und Siebold's Zeitschrift f. wissenschaftl. Zoologie, Band 4.

‖ Nederlandsch Lancet, Bd. 4, Traj., 1848.

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of powdered charcoal and wheat-flour injected into the stomachs of frogs was followed, after a few hours, by the presence of starch-flour in the blood. Donders at the same time expresses the view that solid particles are taken up by the lymphatics, and not by the blood-vessels, inasmuch as he never found such particles in the liver. Marfels and Moleschott* made similar experiments with the blood-corpuscles of sheep and with the pigment particles of the choroid coat of the eye, with which they fed frogs and dogs. Afterwards they saw these particles revolving in the capillaries of the web of the frogs' feet. They also found pigment grains in the intestinal epithelium-cells of the dogs, and rows of the sheep-blood-corpuscles in the intestinal epithelium of the frogs. On the other hand, Hoffmann,† who gave animals metallic mercury or mercurial ointment to eat, observed nothing in the intestinal villi which permitted him to conclude that there was an absorption of these particles. Hollander,‡ having repeated the experiments of Marfels and Moleschott, also came to negative results, and he considers it likely that these observers were deceived by lymph-corpuscles. Moleschott§ at a later period, however, still adhered to his assertions, and endeavored to adduce new proofs. Crocq‖ found that particles of charcoal could pass from the intestine into the blood, and, moreover, that these particles could also pass from the skin, serous membranes, and organs of respiration into the circulation, though only when their respective membranes were deprived of epithelium. Overbeck,¶ in connection with his researches upon mercury, instituted several absorption experiments. He fed two frogs for two days upon mercurial ointment, and on the third day examined them, but was unable to find any globules of mercury in the capillaries of the webbing of the feet. But when the animals were given an emulsion of gum-arabic and finely-divided mercury, and when, some hours afterwards, they died from an intestinal inflammation, the livers of both frogs showed numerous globules of mercury. In the case of a rabbit to which he gave mercurial ointment by the mouth, on the contrary, he was unable to discover globules in either the kidneys or the liver. Rindfleisch** mixed mercurial ointment with potatoes and bread, and fed rabbits and guinea-pigs with the mixture. He found diphtheritic ulcers upon the folds of the lower portion of the intestine, while in the pancreas he discovered only single globules of mercury, but none in the blood or other organs. He concludes from this that mercury penetrates into the open parenchyma of bodies, and particularly through open lymphatics and at the base of eroding ulcers. These results about agree with those of Crocq, above mentioned. Experiments by Stricker and Heitzmann, made upon rabbits for the purpose of determining the absorption from the intestine, on the other hand gave by no means positive results.

The investigations that have just been referred to are perhaps the most reliable on record, but, owing to deficiency in the method of examination, so far as they go to establish direct and positive results the majority of them must be accepted with reserve. The proof, then, of the penetration of solid particles from the intestine into the lymphatics seems at present scarcely to be fully made out.

With reference to the absorption from the integument of the body, numerous experiments have been made, both with soluble and insoluble substances, and likewise with various results. The majority of the experiments with insoluble matter have been instituted with mercury, and, for the most part, more with a view to therapeutics than physiology. However, there remains no doubt that mercury, particularly when applied in the form of an ointment upon the skin, reaches the circulation, the only question being whether the same is taken up as solid matter, or, in the process of the transition, is converted into a soluble combination.

The first investigations concerning the permeability of the skin for mercury were made, according to Overbeck's statement, by Autenrieth and Zeller.†† These experimenters inserted beneath the skin pieces of gold, and, after cicatrization, rubbed over the surface mercurial ointment. Upon examination after death, they found the gold pieces not amalgamated. Béclard,‡‡ and, after his example, Krause, endeavored to force metallic mercury through the epidermis by means of a press, but without success, the epidermis tearing before it allowed the mercury to pass through. Oesterlen§§ experimented by rubbing mercurial ointment into the shaved bellies of cats, and, in addition, he fed them upon the ointment. He states, as a result, that he found globules of mercury, varying in size, in most of the organs, including the liver, pancreas, spleen, lungs, heart, kidneys, cutis, etc. He reports also that he observed the same result in a toad. Eberhard‖‖ came to analogous conclusions with rabbits, while Landerer¶¶ and Van Hasselt*** corroborated the same. Opposed to these statements, Baerensprung,††† who made similar experiments, reports negative results; and Donders,‡‡‡ who rubbed mercurial ointment as well as powdered sulphur into rabbits, failed to meet with success.

Baerensprung, upon another occasion, repeated the experiments of Autenrieth already referred to, but again failed to obtain evidence of the transit of the mercury.

Voit§§§ rubbed mercurial ointment thoroughly into the forearm of a criminal about to be executed. Having cleaned the skin carefully, with a double knife he excised portions of the integument and examined them. The whole epidermis was filled with black particles, which reached as far down as the papillæ, and some even into the corium. The particles were of the smallest size, and black, according to Voit, in consequence of beginning oxidation. The particles seldom extended as far as the blood-vessels.

Merbach‖‖‖ tells us that having rubbed an ointment of iodide of potassium into the skin, he saw the same go through the integument; while Zülser¶¶¶ noticed the penetration of mercurial and iodide of lead ointment into the ducts of the glands, the epidermis of which had been removed by a blister. Delore**** asserts, on the contrary, that insoluble bodies, excepting mercury, are never absorbed, and that ointments containing such ingredients are inert, but that the iodide of lead in small quantities is taken up by wounds, though never by the skin.

Overbeck†††† upon one occasion made a number of inunction experiments upon himself and others, but, even when salivation had taken place, he failed to detect mercury-globules either in the spittle or the urine.

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* Wien. Med. Wochenschr., 1854, Nr. 52.
† Ueber die Aufnahme von Quecksilber und der Fette in den Kreislauf. Diss. Würzburg, 1854.
‡ Virchow's Archiv, 1856.
§ Untersuchungen zur Naturlehre, ii. p. 119, 1857.
‖ Bulletin de l'Académie de Bruxelles, p. 419, 1858.
¶ Mercur und Syphilis, 1861, p. 24.
** Auspitz und Pick's Archiv f. Dermatologie und Syphilis, ii. Bd., p. 309, 1870.

†† Additions à l'Anatomie générale de Bichat, p. 302.
‡‡ Wagner's Handwörterbuch der Physiologie, art. Haut, p. 153.
§§ *Loc. cit.*
‖‖ Henle u. Pfeufer's Archiv, neue Folge, Bd. i., 3 Heft.
¶¶ Buchner's Repert. N. R., Bd. 45, 1847, S. 59.
*** Nederl. Lancet, August, 1849.
††† Halæ, 1847, u. Journ. f. prakt. Chemie von Erdmann u. Marchand, Bd. 50, 1850.
‡‡‡ *Loc. cit.*
§§§ Physiologisch-chemische Untersuchungen, 1 Heft, Augsburg, 1857.
‖‖‖ Archiv f. Balneologie, 1863.
¶¶¶ Wiener Mediz. Rundschau, 1864, iv.
**** Jour. de la Phys., vi. p. 249, 1863.
†††† *Loc. cit.*

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Some inunction experiments upon animals, conducted with great precaution, proved more successful. Here he found small globules of mercury in the connective tissue, as in Voit's experiments, the oxidation which Voit referred to being only exceptionally observed. Leaving out of consideration the experiments which resulted negatively, if we note those which gave positive results, the question at best remains unsatisfactorily answered. In fact, the subject resolves itself into two questions. First, is metallic mercury able to pass through the epidermis? and, second, is it absorbed in the cutis and subcutaneous tissue as metallic mercury? In reference to the question of absorption, the results of Recklinghausen's experiments* made in connection with his work on the lymphatic system have given us some light. He injected into the peritoneums of rabbits various substances, such as milk, cobalt-blue, india-ink, emulsion of yolk of egg, olive-oil, cinnabar, whipped ox-blood, etc., and proved by numerous experiments that the lymphatics not only absorb from the peritoneum fluids which are not miscible with water, but also fluids which contain particles of fixed or changeable form suspended in them. Contradictory to this, other experiments which he made went to show that absorption does not take place through the lymphatics or through other parts of the peritoneum.

It will be readily seen, from the many conflicting statements that have been made by various investigators, that mercury is but poorly suited as a material for determining the absorption of insoluble matter. Accordingly, Auspitz has undertaken his experiments with a substance which, exhibiting a low specific gravity, also possesses definite outline and solidity of form; in this respect differing advantageously from metallic mercury and the various colored substances heretofore employed. The article selected was starch-flour, which, on account of its relations to iodine and polarized light, admits of infallible recognition, and seems particularly adapted to such experiments. The rice-starch granules are very minute, measuring 0.045 mm., while the human red blood-corpuscle measures 0.0077 mm., and that of the rabbit about 0.0069 mm. It is important and of interest to note that these granules of rice-flour are not soluble in the blood, while their relation to iodine is so well known as to need no comment. Preparations and sections were carefully made with clean instruments, and every precaution was taken to prevent the access of particles from without. Specimens were first examined with a low power, then iodine solution was added, and by means of higher powers the change of color was noted. In some of the injections white rice-flour was employed, while in others the flour was colored with iodine solution before the injection, thus materially assisting diagnosis in cases of doubt. These granules of iodized starch were easily distinguishable from particles of pigment through their sharply-defined round or oval form, while their lack of lustre served to separate them from air-bubbles.

The series of experiments under consideration were seven in number, each series embracing from six to twelve separate experiments. They were performed principally upon rabbits, dogs, and guinea-pigs, the results being of such a nature that, to obtain a correct appreciation, it will be necessary to refer to them separately.

The first series consisted of twelve injections of rice-flour suspended in water, thrown into the venous system of rabbits, dogs, and guinea-pigs. Eight injections were made into the external jugular vein, the animals dying either during or directly after the operation. Blood from the different veins was examined immediately after the injections, but only in a single case—in the crural vein—were granules of starch found, and these in groups. Here and there white blood-corpuscles, with one or even two granules of starch in their centre, were discovered, and these were proved by means of iodine. In all the injected animals the lungs were infiltrated with both large and small granules of starch, so that in fine microscopical sections these particles were present in every part of the tissue. In none of the cases, however, was any disease in the structure of the lung-tissue discoverable. In the right ventricle and auricle grains of starch were present in all the cases. The liver contained single granules in all the specimens, though in much less quantity than the lungs. In the spleen only exceptionally could a few granules be detected. The kidneys contained more granules than the spleen, though proportionately less than the liver.

Three injections were next made into the inferior vena cava, just above the diaphragm. The animals were first anæsthetized, tracheotomy was performed, and artificial respiration established. A piece of the thorax wall was then cut out, so that the right lung, heart, and inferior vena cava were exposed. A canula, directed towards the heart, was inserted into the vena cava and tied down, and through this iodized starch in a half-per-cent. chloride of sodium solution was injected. The lungs were instantly expanded, the heart beating for some time after the injection. In the first animal, in which through an accident during tracheotomy the carotid was cut and insufficiently ligated, blood mixed with iodized starch flowed from the artery directly after the injection. The lung of this animal contained starch in abundance, while in the liver there was scarcely any.

In the second animal, blood taken from the crural vein exhibited innumerable small starch-granules, which had lost their tint by passing through the circulation, but which were re-colored violet by the addition of iodine. The lungs held a quantity of the material, which had not lost its color. There were scarcely any granules in either the liver or the kidneys, but in the small arteries of these organs grains were found, which gave the known cross with polarized light.

In the third animal the lungs were densely filled, but neither in the other organs nor in the venous blood were any granules to be found. To complete this first series of experiments, iodized starch was injected directly into the pulmonary artery while the heart was yet beating. The animal died during the operation. Both lungs were injected blue, though the distribution in the different lobes was not symmetrical. Starch-granules were not present in any of the other organs.

If now we glance at the results obtained from the foregoing experiments, we shall see that starch-flour injected directly into the venous system, following the course of the blood, found its way into the right auricle, thence through the right ventricle into the pulmonary artery, and thence into the lung-tissue. While the greater part of the injected material remained in the lung, a smaller portion went through the pulmonary veins into the left auricle, thence into the left ventricle, and from this into the general circulation; so that a few scattered grains were discoverable in the liver, kidney, spleen, and in the arteries and veins of the body. In none of the cases did the lung-tissue injected with starch show any morbid change which could be ascribed to the injection, such as hemorrhagic infarctus or inflammatory swellings. Similar injections into the jugular vein have been made with various substances. Thus, Gaspard, Magendie, Cruveilhier, Gluge, Virchow, and Panum used mercury, while D'Arcet employed gold-dust for his experiments. Again, Magendie injected charcoal-powder; Magendie and Virchow, flour; Panum, globules of wax; and, finally, Virchow and others used fat for their injections. But most of these experi-

*Virchow's Archiv, 1863.

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ments were undertaken with a view of studying the change resulting in the lung-tissue itself, and hence scarcely deserve attention in connection with the present researches.

The second series of experiments consisted of injections into the peritoneum of starch suspended in water. Rabbits and guinea-pigs were selected, and with a large hypodermic syringe the fluid was thrown slowly into the peritoneal sac, the animals not reacting at the time. These five experiments were successfully carried out, with the following results: Two of the rabbits died on the second day, from diarrhœa, peritonitis being present in only one of the cases. Of the other three animals, which were killed, only one exhibited any signs of inflammation; and this case is worthy of a few remarks. A guinea-pig was injected with about a drachm of iodized starch-mixture, and the next day the animal was killed. Upon examination there was no starch found in the blood, nor were there any signs of an accumulation of starch in the peritoneum. Upon the lower border of one of the lobes of the liver, where there was found some exudation-product, small starch-grains were discovered in great number, but neither the liver-cells themselves, nor the spleen, kidneys, nor lungs, contained any granules. It appears probable that in this case the starch did not go through the pulmonary circulation into the liver, and so to the point of exudation, but that the starch-grains wandered forth direct from the peritoneum into the patch of exudation, which had in all probability previously existed. In the remaining animals injected, scattered starch-grains showed themselves here and there in the lungs, while in the liver, spleen, and kidneys they were only rarely discoverable.

The third series of experiments was likewise made upon rabbits and guinea-pigs. Nine animals were selected, and from two to four drachms of flour suspended in water were injected into the subcutaneous tissue just beneath the corium on the back. In two cases the flour was demonstrable in great quantity in the lungs, while in the rest only a few scattered grains were seen. In the two cases referred to, flour-grains were found in the muscles of the heart. In the other organs only a few were discovered. On five occasions out of the nine, starch-granules were found in blood taken from the ear. In two cases there were ecchymoses in the brain, which contained starch-granules. In another case, an obstruction, the size of a pin's head, containing pus, was discovered in the liver, which at the same time contained starch, there being no disease of the remaining organs.

If we look over the above experiments, we shall see that the starch in the majority of the cases was found only in scattered grains and in a few of the organs. A question hence arises whether these grains did not perhaps get into the tissue accidentally from without. Though the greatest amount of care and precaution had been used to prevent any such accident, it was not possible to say positively that such had not taken place, and, accordingly, to insure accurate results, the fourth series of experiments was instituted. This led to a series of injections of starch suspended in oil, thrown into the peritoneums of rabbits. In the first experiment, the animal died on the second day. In a pleuritic exudation which was present, a quantity of starch-flour granules of all sizes was found. The cavity of the heart, the lungs, and the veins of the brain showed abundance of starch. In the second experiment, the fluids of the lungs, the lung-tissue, and the blood of the heart contained starch in quantity; while in the third experiment, the lungs, liver, walls of the heart, and blood-clot all showed starch in moderate quantity.

Having had such favorable results from the experiments just mentioned, Auspitz now injected starch suspended in oil into the subcutaneous tissue of the back, and on the third day after, killed the animals. In the lung itself, as well as in the fluids of the lung, there were quantities of large and small granules and oil-drops. In the lymphatic glands of the axilla, in the liver, spleen, and kidneys, scattered grains were also found. Repeating the same experiment upon another rabbit, he found the different organs even more thoroughly penetrated with starch- and oil-globules, and also the veins of the medulla oblongata and cerebellum filled with numerous starch-grains.

The last two successful series of experiments leave no room for doubt that starch suspended in oil, when injected in quantity into the peritoneal sac, as well as into the subcutaneous tissue, easily reaches the circulation. Moreover, besides the starch, fat was found in the various organs and in the blood, and in such quantities that beyond doubt it came from the injection-fluid. This is an interesting fact, proving that fat is absorbed from the serous membranes and the subcutaneous tissue, as well as from the intestinal tract.

There still remained to determine where the termination-points of absorption existed; and for this purpose the sixth series of investigations was undertaken.

Accordingly, injections with starch-flour were made into the peritoneum and subcutaneous tissue, for the purpose of investigating the condition of the thoracic duct with reference to starch. Several successful experiments in both directions were made, and the thoracic duct was found to contain, besides lymph fluid and lymph elements, a large number of small starch-granules, together with fat. These experiments seemed to establish conclusively that starch is able to pass out from the lymphatics of the diaphragm, and, through the thoracic duct, reach the circulation; also that insoluble substances can be absorbed from the subcutaneous tissue, and so arrive in the circulation.

The next question presenting itself was the permeability of the epidermis for insoluble substances. The principal experiments in this direction have heretofore generally been conducted with mercury,—a substance by no means the most suitable for the purpose. Auspitz's previous investigations concerning mercury induce him to believe that the division of mercury can be made so fine by the process of inunction, that even when with the highest powers of our microscopes no more globules can be detected, the assertion that they are absent cannot positively be made; further, that mercury-globules do not show any sharply-defined form under the microscope, and, inasmuch as there is no chemical reagent which enables us to prove the presence of mercury in the skin or connective tissue, its employment is attended with some uncertainty. Considering, then, the disadvantages of mercury for the demonstration of the permeability of the epidermis, Auspitz instituted a number of experiments with starch-flour upon rabbits and human skin.

Two methods of solving the question here presented themselves: in the first place, to rub the substance into the skin, and then examine the internal organs, particularly the lungs, for the presence of starch; and, secondly, having rubbed the starch well into the skin, to examine the deep portions of the same for the granules of starch. Owing to certain difficulties which would attend the first method, the second plan was adopted, and in the following manner: A portion of shaved skin from the back of a living rabbit, together with the subcutaneous tissue, was cut out and stretched over a cork ring, the edges being fastened down by means of pins. This ring was placed on a perfectly clean glass slide and fastened down with putty. Starch-ointment was now thoroughly rubbed into the skin with the fingers for from fifteen to forty-five minutes, when the putty was removed, and the cork ring with the

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stretched skin lifted up and turned over (the rubbed skin being now placed next to the glass), and again fastened down with putty as before. In this way the under surface of the skin and connective tissue was turned upwards and the layers were studied.

In two experiment, the inunctions were performed upon living rabbits in a similar manner, the skin being dissected but not entirely detached from the animals. The results were the same as in the former case. Similar experiments were made upon human skin taken from the cadaver, and in one case—that of a rabbit—carmine was mixed with the flour. The following results were obtained: In the teased-out preparations of muscle, subcutaneous tissue, and corium there was abundance of fat in a finely-divided condition. Throughout the fat were isolated starch-granules, as well as here and there groups of them, mostly of the smaller variety, and reacting with iodine. The quantity of starch present was much greater in the skin of the rabbits than in the human integument. After the above examination, the skin was thoroughly cleansed with soap, then hardened in alcohol, and fine sections made. Accumulations of starch were found in quantity upon the external surface of the epidermis, penetrating, however, but a short distance into the epidermis. Generally they did not get beyond the epidermis proper, and seldom as far as the deepest layer of the rete Malpighii, while still deeper they were found only exceptionally and usually as single grains surrounded with fat. These scattered starch- and fat-particles permeated the whole skin unevenly, and, as before mentioned, were more numerous in the rabbit than in the human tissue. The openings of the sebaceous glands and hair-follicles, which chanced to come in the way of the sections, contained no starch-granules. The sweat-ducts, as well as the glands themselves, were also free from starch-grains. The conditions found by these section-examinations are valuable to the extent that they corroborate those found in preparations teased out.

This last series of experiments, then, proves that fat in a finely-divided condition, as well as starch and insoluble coloring-matter, as carmine, is able to penetrate the epidermis, when rubbed in in the form of an ointment. Further, that rubbing in for fifteen minutes upon the human skin and upon that of rabbits suffices the purpose. These experiments, moreover, prove conclusively that the horny layer of the epidermis is a barrier to the entrance of insoluble matter, which can be overcome only by strong pressure, the thicker and more compact the epidermis the more difficult being the entrance.

If we now sum up the results of all the experiments that we have been considering, we shall arrive at the following conclusions:

1. That, in mammals, insoluble matter (starch-flour granules) starting from the peritoneum and subcutaneous tissue is able to reach the lungs, and through these organs to enter the general circulation.

2. That these granules, in order to go over into the veins, pass through the lymphatic system. (That they are taken up exclusively in this way, is not as yet proved.)

3. That the epidermis always presents a considerable, though only relative and not absolute, obstruction to the absorption from the integumentary surface.

4. That the absorption is essentially promoted by the mediation of fat, which goes over into the circulation in the same manner as starch-flour, though even more easily.

Finally, the supposition may be offered, even if the direct proof is provisionally deficient, that all that is true of starch-flour, and in a higher degree of fat, may also be asserted of other insoluble bodies of finer division and, therefore, less permanence of form than the starch-flour. This supposition is not in any way contradicted by the discoveries of Auspitz made in connection with his well-known inunction experiments with mercury.

CASE OF ACUTE TETANUS

FOLLOWING A PUNCTURED WOUND OF THE RIGHT FOOT, AND PROVING FATAL IN LESS THAN TWENTY-FOUR HOURS.

BY RUDOLFO VALDIVIESO, M.D.,

Resident Physician at the Children's Hospital.

HANNAH F., nine years of age, was admitted to the Children's Hospital on the 26th of July, 1871, suffering from a punctured wound of the plantar surface of the right foot.

The accident took place six days previous to her admittance to the house. Although the wound at first apparently did well, the effort of coughing or sneezing was followed by hemorrhage, so that the patient sustained a considerable loss of blood.

Condition when admitted.—The patient was rather nervous, countenance pale, pulse from 90 to 100 in a minute, surface cold and the appetite poor. The wound was healed, but there was a pulsating tumor underneath the skin, covering an extent of about a square inch.

Five hours after her admission the wound commenced to bleed, but the hemorrhage was checked by the use of Monsel's solution and the application of a graduated compress.

The next day, at 11 A.M., she complained of severe pain in the foot, which was relieved by three doses of hydrate of chloral (gr. v each).

On Saturday, July 29, Dr. John Ashhurst, Jr., saw the case, and, having etherized the patient, explored the wound, first enlarging it by a crucial incision. An old clot of blood, about the size of a bean, was found in the wound, but no foreign body. The operation was attended with but little bleeding, and the source of the previous hemorrhages could not be detected. As a precautionary measure, the wound was packed with lint and a graduated compress applied, the leg flexed on the thigh, and pressure made over the artery by means of a roll of bandage secured in the popliteal space.

I visited the patient at 3 P.M. At this time she complained only of pain in the stomach and of difficulty in swallowing, which I attributed to the after-effects of the ether.

Dr. Ashhurst again saw the patient at 4 P.M., and found her condition satisfactory.

During the ensuing night she was very restless, and the next morning, at 5.45 A.M., I was called to her bedside, when I found her in a critical condition. The jaws were firmly closed, her limbs rigid and contracted, and opisthotonos existed. The respiration was difficult and abdominal in character, the walls of the thorax remaining fixed. The pupils were dilated; the pulse from 100 to 110 in a minute; the mind perfectly clear.

I immediately removed the bandage and the packing of the wound, and examined it very carefully, but could not detect anything abnormal in it.

I ordered an ice-bag to be applied along the spine, and cold water to the forehead. I endeavored to administer a solution of morphia by the mouth, but desisted on finding that two or three drops nearly choked the patient.

After consultation with Dr. Rex (who saw the case in Dr. Ashhurst's absence), we agreed upon the administration of calabar bean, hypodermically, as the child could not swallow. Fifteen minims of a solution (gr. ij to ʒvj) were injected at 9.15 A.M. Ten or fifteen minutes afterwards the condition of the patient had

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improved. She could now swallow, and her respiration was decidedly easier.

At 11 A.M. the ice-bag was removed from the spine, and frictions were made with oil of turpentine.

At 11.30 A.M. the child was comparatively well, and was then able to open the mouth sufficiently to allow the administration of food, though slight opisthotonos still existed. Forty-five minims of the same solution of calabar bean which had been used hypodermically were now given by the mouth, while beef-tea, milk, and ice-cream were freely administered.

About 7.30 P.M. it became evident that the patient was growing worse, and, as she could no longer swallow, I discontinued medications by the mouth.

At eight o'clock she was very feverish, and constantly asking to have her head and hands bathed with cold water. Her respirations were short and frequent; pulse 140; very high temperature.

At 11 P.M. she had a convulsion, and for a moment I thought she was dead. The face became completely purple; neither pulse nor palpitation of the heart could be detected. The lower jaw fell, and complete relaxation of the muscular system followed. I tried artificial respiration (Sylvester's method), and for a few minutes with success; but the rigidity became so excessive that the entire body could be lifted by placing the hands under the head. A second convulsion occurred at 1 A.M., but was not so severe as the first. From this time until 4 A.M., when death took place, convulsions followed at short intervals. Complete relaxation of the entire muscular system occurred shortly after death. No post-mortem examination was obtained.

The pupils were not affected at any time by the administration of the calabar bean, which was given as follows:

9.15 A.M., hypodermically, ℥xv; 11.30 A.M., by the mouth, ℥xlv; 1.15 P.M., by the mouth, ℥xlv; 3.15 P.M., by the mouth, ℥xlv; 5.15 P.M., by the mouth, ℥xlv; 7.15 P.M., by the mouth, ℥xlv; 9.15 P.M., hypodermically, ℥xx; 11.15 P.M., hypodermically, ℥xx; 1.15 A.M., hypodermically, ℥xx; 3.15 A.M., hypodermically, ℥xx.

In all, five fluidrachms and twenty minims of the solution, or nearly two grains, were given in the course of eighteen hours.

THE HYPODERMIC USE OF THE SULPHATE OF QUINIA.

BY FRANCIS L. HAYNES, M.D.,

One of the Resident Physicians at the Episcopal Hospital.

WE see little concerning this method of administering quinia in the medical periodicals of to-day. Although formerly received with favor, it is now, I think, viewed with distrust by medical men generally. There is, without doubt, good foundation for such a feeling. We have all read or heard alarming accounts of the irritating effects of quinia used in this manner. Thus, Prof. Fonssagrives mentions* two cases in which fatal tetanus followed the hypodermic use of sulphate of quinia dissolved in sulphuric acid and water. Dr. Mitchell, of New Orleans, records† a case in which a deep ulcer, and, finally, fatal tetanus, followed the injection of sulphate of quinia. He does not inform us of the way in which the salt was prepared for use.

It is possible, however, that the bad effects of this method are caused by the large quantity of acid used in dissolving the sulphate, and not by the salt itself. The following experiments and cases tend to support this opinion. They were made upon a healthy adult male.

* *Lancet*, July 6, 1867.
† *Abstract of the Medical Sciences*, vol. xlvi. p. 100.

The first two experiments were made in order to establish standards with which to compare the effects of the subsequent experiments.

Experiment I.—One fluidrachm of distilled water was injected over the left biceps muscle of a healthy man. Slight pain, tenderness, redness, and swelling ensued. All these symptoms disappeared in a few hours, except the tenderness, which lasted four days.

Experiment II.—One-half a grain of sulphate of quinia was dissolved in acetic acid, and sufficient distilled water added to make half a fluidrachm. This was injected over the left long supinator muscle of the radius. Intense stinging and burning pain attended and followed the injection. On the next day, the skin at the point of injection sloughed to the extent of a patch 9 lines by 3 lines, and one-half of the surface of the forearm became quite red, swollen, tender, and painful. Three days afterwards the pain, swelling, and redness had disappeared. The tenderness persisted until the tenth day. Serum exuded beneath the patch of dead skin, which dried up and formed a thick scab, and which fell off on the thirty-second day after the injection, leaving a depressed cicatrix.

In the succeeding experiments and cases quinia suspended in Bower's glycerine was used. The sulphate of quinia was carefully "rubbed up" with the glycerine (in the proportion of not more than gr. iv. to ʒi). The only inconvenience in the use of this mixture resulted from the fact that the glycerine is apt to dissolve the cement used to unite the different portions of the syringe. When very thick glycerine was used, it was diluted with distilled water.

Experiment III.—Injected into the right forearm half a grain of sulphate of quinia suspended in half a fluidrachm of glycerine. The only symptom was very slight pain attending the injection.

Experiment IV.—Injected into the same arm, on the same day, one grain of quinia suspended in ʒi glycerine. There was a little more pain, with some redness, which lasted a few minutes. The point of injection remained slightly tender for two days.

Experiment V.—Injected into the right forearm gr. ij quinia with ʒi glycerine. There was slight pain for five minutes. The seat of injection became prominent. At the apex of this prominence a livid spot appeared, which was enclosed in a ring of white bloodless skin, surrounding which was a narrow border of red. This persisted for only a few minutes, and was unattended by any disagreeable sensation. The next day there was no redness, pain, or swelling, and tenderness could just be detected.

Experiment VI.—Injected four grains of sulphate of quinia suspended in ʒi glycerine. The same appearances as in *Experiment V.* presented themselves. The next day tenderness barely remained.

The following are cases of malarial fever in which the above-described mixture was used:

Case I.—P. H., male, æt. 50, was admitted to the Episcopal Hospital March 23, 1871. Has had quotidian intermittent fever for ten days. The last paroxysm occurred on the day of admission at 10 A.M. On the evening of the 23d, I injected into the right arm under the skin covering the biceps muscle gr. iv sulphate of quinia suspended in ʒi glycerine. He received no other treatment, and was discharged—the chill having failed to recur—on the 25th at 12 M. The only symptoms produced by the injection were slight elevation of the skin, and pain lasting for five minutes.

Case II.—W. D., æt. 45, seaman, was admitted March 28, 1871. Has had various forms of malarial fever for five months. The disease was temporarily checked, but reappeared on the 26th. On the 27th, the paroxysm recurred at 9 P.M.,—the cold stage lasting four hours, the hot stage five hours. On admission he was very weak and emaciated, and presented the malarial cachexia in a marked degree. At 3.30 P.M. of the 28th, I injected gr. iv sulphate of quinia suspended in ʒi glycerine. 29th, no chill; no inconvenience at the seat of injection. At 6.30 P.M. I injected two and two-thirds

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grains of sulphate of quinia; 30th, sitting up for the first time since admission; 31st, slight pain and very slight swelling at the seat of the second injection. This was the only day on which any inconvenience was felt from either injection. The paroxysm having failed to recur for three days, tonics were now administered by the mouth. He rapidly improved, and was discharged well on April 10.

Case III.—L. L., female, æt. 44. April 14, a paroxysm of intermittent fever; on the 16th, another; on the 17th, she was admitted. She is very debilitated. At 12 M. I injected gr. iv sulphate of quinia into the arm; 18th, repeated the injection at 9 A.M. At 10.30 she had a slight flush of heat, followed by perspiration, lasting for a few moments. On the 19th, there were slight redness and pain at the seat of the first injection. On the 24th, nothing abnormal could be discovered at the seat of the first injection; the seat of the second was red and tender over a spot one inch in diameter. Next day the redness was much less, and it soon entirely disappeared. On the 30th, the patient was discharged, entirely well,—having received no further treatment.

Case IV.—S. G., male, æt. 32, admitted June 16. Has suffered from tertian intermittent fever for fourteen days. Last chill occurred on the 15th at 10 P.M. On the 17th, gr. iss sulphate of quinia were injected into the forearm at 9 A.M.; at 7 P.M., gr. vi were injected. 20th, no recurrence of the paroxysm. Ordered tonics by stomach. Slight redness and pain were the only local symptoms produced by the injections. The patient was discharged well on the 27th.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, JUNE 28, 1871.

Reported by Dr. Elliott Richardson.

DEPRESSED FRACTURE OF THE SKULL.

THE patient was a boy fifteen years of age, presenting a small depression in the parietal bone, near the position of the anterior fontanel, a little to the left of the median line of the skull. About six years ago he received a blow from a pick, which caused the injury described. He experienced no inconvenience from it until five months ago, when epileptic fits made their appearance. These have occurred at variable intervals since that time, sometimes a month elapsing without their occurrence.

When presented at clinic, the seat of fracture was found to be very sensitive to pressure. Slight paralysis of the right side was noticed, but he was able to walk well, and did not trip or fall. His memory was not much impaired. He had been attending school, but pursued his studies with difficulty. His appetite was good.

Prof. Agnew said these symptoms occur at variable intervals after the receipt of injuries of this character. He thought that the intellect was not yet sufficiently impaired, nor the convulsions sufficiently frequent, to warrant the operation of trephining, but would recommend the administration of bromide of potassium in doses of ten grains three times a day, to be increased after a week or two to fifteen or twenty grains three times a day. If by the following September the symptoms should be more unfavorable, then an operation for the removal of the depressed fragment of bone would be advisable.

INGUINAL HERNIA.

A colored woman, twenty-four years old, had a tumor in the right groin presenting all the characters of hernia. It was an oblique inguinal hernia, about the size of a walnut. She had had it for about a year, and had always been able to reduce it without difficulty until last Sunday, the 24th inst., when, efforts to reduce it having failed, it became the seat of much pain, and vomiting ensued.

The patient was placed upon her back, with her knees and shoulders elevated, when Prof. Agnew, by careful manipulation, succeeded in its reduction. He then directed a compress to be applied and retained until a truss could be procured.

EPITHELIOMA.

The patient, a man aged fifty-five years, had suffered from epithelioma of the lower lip for the past two years, during which time it had been treated by empirics with various cauterizing agents. It commenced as a little crack in the lip.

When presented at clinic, he had a large and very foul ulcer, with an augmented secretion of saliva, which, flowing over the sore, was a cause of increased irritation. A large portion of the lip on the left side had been destroyed, and the lymphatic glands of that side of the neck were much enlarged.

Prof. Agnew said the only operation to be suggested in this case would require the removal of a portion of the lower maxillary bone; and, as the lymphatic glands were involved, even this would probably prove ineffectual.

These growths, the lecturer said, should be removed early, while confined to the lip; and in this case he would only advise the internal use of the iodide of arsenic in doses of one-eighteenth of a grain three times a day, together with tonics and the local application of subnitrate of bismuth.

HYSTERIA.

This woman, aged twenty-one years, gave the following history:

Last September she had a child, since which she had been subject at times to pain in the pit of the stomach, and, at the same time, to loss of voice. These spells continued for two hours at a time, and recurred daily, sometimes for two weeks together.

After a thorough examination of the throat, chest, and abdomen, and no organic disease being discovered, the trouble was pronounced to be of a hysterical nature.

ABSCESS OF THE HAND.

This case, a man aged twenty-nine years, illustrated a complication not unusual in injuries of the fingers,—viz., palmar abscess. On the 1st of the present month the thumb and two fingers of the right hand were mutilated by a circular saw, and a few hours afterwards amputation of portions of the lacerated members was performed at this institution. Abscess had followed in the radial side of the hand beneath the palmar fascia.

The abscess was opened by a free incision in the cleft between the thumb and the index-finger, and the patient directed to keep it poulticed until the parts heal.

EPISCOPAL HOSPITAL.

Reported by Louis Starr, M.D., Resident Physician.

RUPIA.

M. K., æt. 60, white, widow. She first came to the Hospital Dispensary on June 26, 1871, suffering with an ulcer situated upon the forehead, above the eyebrow. The members of her own family were all healthy; her husband, who died eight years ago from the effects of an accident, had, so far as she knows, no constitutional disease; and her two children, both of whom are now dead, enjoyed good health up to the time of their death from some acute disease.

Six years ago she received a scratch upon the forehead, at the seat of the present ulceration, from the nails of a child she was nursing; at the time the child was well, and has continued so since: she was, however, in bad health herself. This scratch did not heal, but gradually spread, and in a year developed into an ulcer, and became covered by a thick, dark scab, which she describes as having been wider at the base than at the apex, and laminated; after a month or two this became loose and fell off, leaving a deep ulcer, which was covered by a greenish pus, and discharged freely for some time, before another scab formed.

From that time up to the date of her appearance at the hospital, crusts presenting the above characteristics have continued to form and fall off; she also states that she had a gnawing pain in the bones, which was most marked at night; but there is no eruption on any other part of her body. Dur-

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ing a portion of this period she was engaged in cooking, which probably aggravated her condition, as she was obliged to give it up on account of the great pain in the ulcer, produced by the heat of the fire.

She had been treated in many ways, and she states that the mode of treatment seemed to make a difference in the thickness and duration of the scabs, as well as in the amount of discharge, but that the ulcer never healed, though it was several times reduced in size.

On coming to the hospital she was put upon iodide of potassium and bichloride of mercury internally, and directed to use an ointment consisting of calomel and benzoated oxide of zinc. This treatment was continued without effect until August 10. At that time the ulcer was one inch in diameter, circular, with edges slightly raised, discharging freely, and showing no tendency to heal; there was a burning sensation in the part, and pressure caused much pain, but no bleeding from the few granulations present. The surrounding skin was pale and unhealthy.

The above treatment was continued, except that the iodide of potassium was alone used internally, until August 17; on that day straps of adhesive plaster, one-fourth of an inch wide, were applied to the ulcer, the strapping being begun half an inch below the sore on the sound skin, and extending the same distance on each side and above it. The straps were drawn moderately tight, each one overlapping one-third of the one before it. The straps were reapplied on August 18, 19, 21, 23, 25, and 29. For the first two days the discharge continued, on the third it was greatly diminished, and there has been none since; the pain decreased rapidly, until on the fourth day of the dressing it was noticed only as a slight pricking sensation; from day to day the surrounding tissue became more healthy, the edges less elevated, and the ulcer soon began to skin over; the latter process went on rapidly until the sore was reduced to half its original size, but has been more slow since.

September 1.—To-day the ulcer is entirely covered by a pale skin, and the slight pricking pain, above noted, has nearly disappeared; she still complains of the gnawing pain in the bones, but her general health and spirits are much better. The straps were reapplied for the eighth time, merely to give support, and she was discharged, with the order to continue the iodide of potassium for a short time longer.

CASE OF POISONING BY OXALIC ACID.

Maggie ——, aged about one year, was brought to the Dispensary of the Episcopal Hospital, April 26, 1871. Her mother stated that half an hour before coming to the hospital, her nurse had given her what she supposed to be a piece of sugar: as soon as the child had swallowed this, she was seized with vomiting, which had continued up to the time of her appearance.

The patient, when seen, was in a relaxed condition, her face pale, and her lips blue; she was evidently suffering much pain, which was increased when pressure was made in the epigastric region; there was constant retching and vomiting, the ejected matter consisting of a frothy, watery fluid.

Supposing that the little sufferer had been poisoned by acetate of lead, tannic acid was given, but it was immediately rejected; lime-water, and afterwards magnesia, was administered with like effect. The vomiting was, however, finally arrested by creasote gtt. iij. Soon after this the child became free from pain, and fell asleep; after several hours she was discharged, none of the symptoms having returned.

Examination of Ejecta.—After standing a short time, a brownish precipitate fell to the bottom of the vial containing the vomited matter, leaving above a clear transparent fluid of a brownish tinge.

Upon microscopical examination of the precipitate a number of long columnar quadrangular crystals of oxalic acid were discovered, together with epithelial cells and some crenated blood-corpuscles.

On adding lime-water to a portion of the supernatant fluid, a white precipitate formed, which under the microscope showed dumb-bell crystals. Upon treating another portion with a solution of sulphate of copper, a bluish-white precipitate fell, showing the fluid to have contained oxalic acid.

CONTRAINDICATIONS TO THE USE OF DIGITALIS.—Dr. J. M. Fothergill, in his Hastings Prize Essay on Digitalis (*British Medical Journal*, July 29, 1871), makes the following important remarks on this subject:

"It is necessary to review the circumstances which may modify our views as to the desirability of administering or withholding digitalis. We have seen that it acts by producing contraction of the heart, and, to some extent, contraction of the capillaries (or arterioles and venules). It is obvious, then, that an increased arterial tension resulting therefrom will test the integrity of the structures intermediate, namely, the arteries. It is, then, of primary importance to ascertain and bear in mind the condition of the arterial system, and to conduct our treatment accordingly. Thus, atheroma or endoarteritis is commonly associated with cardiac complaints, and more especially with those manifestations of over-taxation for which the patient consults us. The primary consequence of atheroma is hypertrophy, which sooner or later yields to fatty degeneration, in the manner described in an early section. This exceedingly complicated condition is frequently presented to us, and increases the difficulty of adopting a treatment which secures the maximum of good and the minimum of risk. Thus, while the increased action of the heart (the hypertrophy) supplements the inelastic condition of the arteries, and restores the balance of the circulation, it is in itself not without an alloy, for the atheroma is most marked at those points where there is the greatest pressure, and thus the increased action tests these weak points most severely. Thus, in the thin-walled vessels at the base of the encephalon we have often rupture. So in our treatment of cardiac debility with or without hypertrophy, we must be guarded and watch the effect of our remedies most narrowly. In the palpitation of hypertrophy, this is especially necessary. It is, however, possible with care to get at what is desired without any imminent risk, but small doses alone are admissible; and until the practitioner has familiarized himself with all the complex relations of this condition, and can wield his remedy with skill and confidence, it may be safer to resort to some other agent. It is within the limits of possibility to reach the honey and yet avoid the sting, but the attempt must only be made after careful calculations as to the force of the pulse, the state of the vessels, the amount of palpitation or irregularity, and a critical weighing of the different factors. *The presence of atheroma to any extent is the contraindication par excellence against the use of digitalis.* In considering the conditions which contraindicate the use of digitalis, it is necessary to investigate the importance of fatty degeneration of the heart itself. Brunton has, from a consideration of the increased capillary opposition, warned us against its use in fatty degeneration; his objection is, however, only a theoretical one, though unquestionably rational. Reith and Gull have also made a similar objection, but on other grounds.

"The occurrence of intermittency during the administration of this agent has hitherto been deemed a valid contraindication; and certainly, if we feel assured that it is the consequence of the drug, it is an evidence of its physiological effects being reached. Thus, if along with it we find the pulse becoming thready, the heart's action becoming a steady thud, a diminution in the bulk of urine, showing a lessened pressure on the glomeruli of the kidney, then it may be necessary to withdraw the digitalis. It may, however, not only be no contraindication to its use, but even be the strongest evidence of the need for its administration in increased quantity. Thus, where any obstacle is presented at all suddenly to the circulation, and digitalis is given, intermittency may come on as the result of the heart's inability, in spite of the stimulus to contraction, to struggle against it; and the administration of the agent in increased quantity may be clearly indicated."

THE USE OF CAMPHOR IN HOSPITAL GANGRENE.—M. Netter (*New York Medical Journal*, June, 1871), of the Military Hospital of Rennes, has found camphor in powder very efficacious in hospital gangrene, by sprinkling it abundantly over the wound. In his service, as well as in that of M. Aubry, surgeon of the same institution, this affection had been treated by the usual means,—chloride of iron and carbolic acid, with alcohol,—but without success. By using very freely the powdered camphor, three patients were successfully treated, and in forty-eight hours the disease disappeared from the hospital.

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THE MEDICAL TIMES.
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EDITORIAL.

THE COMPLETION OF THE FIRST VOLUME.

IN bringing to a conclusion the first volume of *The Medical Times*, the editors feel that they have good cause for congratulation in the success which the journal has already attained. When, a little more than a year ago, it was determined to add another to the numerous medical periodicals of the country, the enterprise appeared to many unnecessary, and doubtless there were some who predicted its speedy failure. It seemed, however, to the friends of *The Medical Times* that there was room for a semi-monthly journal which should thoroughly represent the progress of the medical sciences not only in this country, but also abroad. The present editors are aware that much of the reputation of *The Medical Times* is due to the able manner in which the first twelve numbers were edited by Dr. William Pepper, who assumed the duties of editor in consequence of the illness, and until the death, of Dr. Edward Rhoads, to whose care the interests of the journal were at first intrusted. It has been their constant aim to render the succeeding numbers equal to their predecessors; and they feel much pleasure in the fact that *The Medical Times* continues to be more generally quoted by medical journals abroad than any similar journal in this country. They believe, also, that the contents of the first volume will compare favorably for character and variety with those of any other medical periodical issued during the same period of time. No other journal can show a list of collaborators containing the names of more distinguished physicians than that which is attached to this; and a glance at the table of contents will show that most of these gentlemen have not contented themselves with allowing their names to grace the prospectus, but have manifested their interest in its prosperity by contributing valuable papers to its pages.

The editors intend in the new volume to devote a portion of the journal, under the head of Leading Articles, to communications in which subjects of interest to the medical profession may be discussed, the name of the writer of the article appearing, or not, as he may choose; but no paper on any subject will be inserted if the name of the author is withheld from the editors.

The editors, therefore, look forward with confidence to the commencement of a new volume, expecting, as they do, to receive the same generous support which has hitherto been extended to them by the profession not only in this city, but also throughout the United States, and promise on their part not to relax their efforts to make *The Medical Times* the best journal of its kind in the country.

THE FUNGAL THEORY OF ZYMOTIC DISEASE.

WE had hoped that this phantom theory, which certain men have been so long and so ardently pursuing, had at last been chased into marshes, so universally recognized that every one would at a glance perceive the will-o'-the-wisp character of their offspring. But fighting with shadows is always dubious work, and we find that we were mistaken in the belief that sufficient of time, brains, and ink had been spent upon the subject to satisfy all. Dr. Sansom,* in a recent otherwise able work, has reasserted the old theory in a somewhat modified form. Badly wounded, however, does it now seem to be, even in the house of its friend and by his hands. The old arguments which we have been meeting for many years—familiar faces, which we thought had been so deeply buried as to defy the most enthusiastic resurrectionist—stare at us from every page. One of these, which Dr. Sansom seems most lovingly to claim as a powerful friend, was long ago brought forward (*Amer. Jour. Med. Sci.*) as an unanswerable, or at least unanswered, argument *against* the theory. This is the fact that in flies and other insects there are undoubted fatal affections produced by fungi. It was shown, however, that these diseases were essentially not zymotic,—that the fungi grew and permeated all the tissues, and were most readily demonstrated by the microscope; from which the evident inference was drawn that if human zymotic diseases were caused by fungi, the latter ought to be distinctly visible, and the former have a course somewhat parallel to that of the disease of the fly.

The work of Dr. Sansom is, as already stated, a severe blow to the theory he advocates. If, with all his ability and ingenuity, he can bring no more aid to its waning life, what hope is there for it? Yet we fear it is not yet dead; the fancies of men, dazzled by the splendid mirage which it raises before their eyes, will still cling to it, torturing imagination in its support.

The vitality of a lie is most wonderful; root it out and destroy it utterly, as you may fondly hope, yet it springs up where least expected, apparently as fresh as ever. It travels as though borne on the wings of the wind, while laggard truth labors far behind in apparently hopeless endeavor to counteract its influence. Although knowing this full well, yet we see with astonishment Prof. Salisbury quoted as authority,—a man who, when his

* The Antiseptic System: a Treatise on Carbolic Acid and its Compounds. By Arthur Ernest Sansom. Philadelphia, J. B. Lippincott & Co.

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work was ridiculed and scoffed at, and when he was challenged to the proof, so failed to meet the challenge, that his warmest advocates abandoned him,—no less important a journal than the *Medical Times and Gazette*, after having spoken of him editorially as "The Great American Physician," (!!!) stating that unless he met the charges he was annihilated.

Space, time, and inclination are alike wanting us to follow Dr. Sansom through his long argument, much of which we think of no moment, since it proves points that no one doubts.

The gist of the matter may, however, be summed up in a few words, as follows:

All admit the universality of fungi, and also that they are occasionally found in the blood of men and animals dead of infectious disease; but the opponents of the theory have said and *proven* that the same fungi, or their germs, are found in healthy blood and secretions, and that in many cases of the various diseases in which at other times they are present they are no more apparent than in such healthy blood, and that their injection into the blood fails to develop the diseases in question: from which it inevitably follows that they are not to be looked on as the direct causes of the disease. No amount of speculative reasoning will at present avail anything to the fungalists. They must bring forward some new facts even to rightfully claim a hearing.

One very marked feature of this controversy is the ease with which the advocates of the fungal theory shift their position. Salisbury asserted that the fungi and palmellaceæ and their spores could be seen, in body and substance, in the blood, circulating everywhere. When he was placed at rest, peaceful and quiet, beneath the sod of general, total distrust, Hallier came forward to the aid of the dogma, modifying it very essentially. No fungi or spores are longer to be seen in the blood or tissues, but *micrococci*, minute masses of germinal fungal matter, whose existence or non-existence in the fluids or tissues can never be optically proven, because they possess no optical distinctive characters, but whose presence is to be recognized by their fruits. Isolating the secretions in a peculiar apparatus, and placing with them a little sugar and other substances for pabulum, he succeeded in growing peculiar species of fungi from blood taken from individuals sick with various zymotic diseases. Alas for Hallier, and alas for his theories, Dr. Billings, of Washington, on repeating these culture-experiments, reproduced the various species which Hallier described, first from diseased secretions and blood, next from healthy secretions and blood, and next from the sugar and material put in as pabulum; demonstrating that Hallier's disease-fungi were no distinct new species, but merely ordinary forms modified by peculiar circumstances of growth, forms whose germs were no doubt introduced into his culture-apparatus with the pabulum, although also almost certainly existing in all human fluids. A *coup de grace*, apparently.

But no! Dr. Sansom comes to the rescue,—a change of base; a new theory is brought forward, with the old name; a theory which has this advantage,—it is so intangible as to be almost placed beyond the sphere of scientific research, and as little capable of being disproved as proved. According to this theory, the fungal germs exist as germinal masses in the diseased blood, in the micrococcus state. They do not, however, represent peculiar forms, but merely ordinary fungi, which owe their acquired fearful powers to peculiar conditions of soil and growth. We quote, from the work alluded to, testimony which is offered as proving the theory:

"Mr. Semmes, having demonstrated the existence of fungoid particles in the blood of glanders and the anthracic disease of cattle, tried many experiments on healthy beasts, by injecting fungus-elements into their circulation. The injection of *micrococci* ferments, of the *arthrococci* of acid fermentations, and of ordinary penicillium spores produced no result whatever: the beasts remained in perfect health. When, however, the penicillium was cultivated upon the blood of an animal infected with the anthracic disease, injection of its spores induced in another animal disease and death."

And this is soberly brought forward as supporting the fungal theory! Surely this discussion is waxing not only tiresome but puerile. A poison certainly exists in the anthracic blood,—most subtile in its nature. That fungi may be made to carry this poison is nothing strange; so will bits of wood or clothing. Would the man who stated that the cause of vaccine disease is steel, because the lancet is used, be considered worthy of a hearing? That fungi may act indirectly as the cause of blood-disease, by carrying poison or by producing decomposition in wounds and the consequent local production of the poison or poisons of septicæmia, is very probable; but that ordinary zymotic diseases owe their existence directly to these low plants is a very different theorem,—a theorem upon whose proof an extraordinary amount of time and energy has been spent with entirely negative results, every argument brought forward in its favor having been refuted almost as soon as enunciated.

Although this cannot be gainsaid, the continued homage paid by able intellects indicates that underneath all the absurdities of the fungal theories there must lie some hidden truth. Pure, simple error rarely draws to its support such an array of able men, whilst half-truths, imperfect truths, truths felt after rather than even dimly seen, often lead astray and infatuate the best of us. There must then, we think, be some truth towards which these various minds have been instinctively striving. There are, it must be acknowledged, some very strange facts, which point most decidedly to the connection of fungi or other low living entities with certain epidemic diseases, which may be grouped as malarious affections, the word malarious being used not in its strict sense, but as distinguishing diseases due to earth exhalations, from the contagious zymotic affections, such as smallpox. Of such malarious diseases yellow fever may be taken as a type. In its history are to be found numerous facts of the kind just spoken of. A city has been reeking and fermenting in its filth under the blaze of an almost tropical sun, but no fever develops itself until a vessel arrives from some port where the disease is prevalent, and, as though a fatal vital germ had been brought,

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suddenly the whole mass of decomposing matter becomes vivified with deadly power. A man-of-war, with a healthy crew, although foul with stagnant bilge-water, stops at a port where yellow fever prevails. No cases occur on board whilst in the harbor, but when some days out at sea again a large part of the crew are simultaneously stricken down by the dread disease. The hatches are at once battened down, the hold of the vessel thoroughly scalded out with superheated steam, and the epidemic arrested. These facts, in the present twilight of our ignorance, certainly look as though life of some sort, most probably fungal life, was the ultimate cause of the fever. On the other hand, it appears more positive and certain that no living entity or particle is in the blood of the fever-stricken men, that had not previously existed there.

The two facts are, however, so readily reconcilable that it is strange their joint meaning has not hitherto been clearly pointed out. A fungus grows in some water containing sugar, and the drunkard reels homeward at midnight. Without the fungus the alcohol had not been; but the alcohol, not the fungus, is the immediate cause of his disease,—drunkenness.

It does appear as though in yellow fever we had a parallel to this. A fungus grows in the ship's bilge-water or the city's refuse-heap. Itself harmless to man, its educts, the principles produced by the fermentation it causes, are the deadly yellow-fever poison. Wherever these educts are in the air, the fungus must be in the neighborhood,—the two travelling together, as cause and effect must ever do. Such is our explanation of the facts. We do not offer it as a proven theory. As already stated, the present twilight is too dim to see things, save "as trees walking." We simply receive it as at present the most plausible explanation. It is most emphatically not a fungal theory of disease-origin, at least of the same nature as the old ones. It rests upon the very denial of the existence of poisonous fungi in the blood. It does not appear at present to apply to the so-called zymotic diseases, in which the poison is multiplied in the blood,—only to the malarious affections, in which the poison is multiplied outside of the body.

THE CONDITION OF THE BONES IN THE INSANE.

ATTENTION has been recently directed in several of the English periodicals to the fact that the bones, and especially the ribs, of the insane are very frequently and very readily broken; in other words, this class of persons appear to be affected with osteomalacia in relatively greater number than the rest of the community. The fact is, however, not altogether a new or unknown one, for Mr. Solly has reported in the "Medico-Chirurgical Transactions" the case of a young woman who was the subject of this disease, and who was also insane; and of the one hundred and forty-five cases which Mr. Durham has collected, and which are analyzed in vol. x., 3d series, of the "Guy's Hospital Reports," eight occurred in insane patients. More recently, Dr. Rogers and Dr. J. C. Brown have contributed to the "Liverpool Medical and Surgical Reports" a paper "On Fractured Ribs in Insane Patients." Dr. Ormerod and Dr. Hearder have also written on the same subject, the former having published in the last volume of the "St. Bartholomew's Hospital Reports" some "Observations on a Peculiar Condition of the Bones of Two Insane Patients who had Fractured Ribs," and the latter a paper in the "Journal of Mental Science" for January, 1871, on "Fractured Ribs in Insane Patients." In the cases reported in these communications, the ribs were broken by causes which would have inflicted no injury in their normal condition; in some cases, indeed, the fracture seems to have been brought about simply by muscular contraction.

Occasionally the cause of death was the subject of investigation by the coroner, and at the inquest it was shown how little force was necessary to fracture the ribs, and how difficult, in consequence of the absence of crepitation, it would be to recognize the existence of fractures in patients affected with mollities ossium. In some cases the brittleness of the ribs was so great that they could readily be crushed between the thumb and forefinger, and in one case a small scalpel was pushed through the rib of a man "almost as easily as if it had been only a shell." A gentleman to whom some ribs were sent for a careful examination compared them in strength to card-board, and thought that during life they would have been fractured from very trivial causes,—as, for example, falling suddenly against a table at which the person was seated. Although the ribs are the bones which most frequently suffer, and in which the organic changes are generally most advanced, they are by no means the only ones which may be affected.

None of the writers whose communications have suggested this article seem to think that this excessive brittleness of the bones is necessarily dependent upon insanity, although a connection between the cerebral disease and the deficiency of the phosphates in the bones would appear naturally to suggest itself. Dr. Durham, indeed, says that in the histories of all the cases of mollities ossium which he has been able to collect, mention is made of the existence of some influence, or of some combination of influences, well known to be capable of producing great general depression of the nervous system; but the other authors all hold that the changes in the osseous system are independent of the cerebral disease, or at most that the mental and physical conditions are the common results of the same cause. Want, disease, distress of body and mind, old age, and all that brings on premature old age, will sometimes bring on this disease alone, or, acting with more force or upon more susceptible persons, will, in addition to it, cause insanity. It will of course be understood that all classes of the insane are not equally liable to mollities ossium, and that it occurs with greatest frequency in that class in which the mental disease is complicated with general par-

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alysis or with any other condition which leads to general exhaustion.

Fractures are more liable to occur in insane sufferers from osteomalacia than in others, simply because they are often obstinate and quarrelsome, and seldom realize how ill and weak they are; so that, as Dr. Ormerod remarks, "a rib which would last a feeble, quiet, bedridden patient to the end of his days, might readily break under the wayward movements of a lunatic and the mechanical restraint, however gently and judiciously applied, necessary to control his movements."

The subject of the treatment of the insane is at present exciting considerable interest in this country, and there is a growing feeling among the uninformed that this unhappy class of people are, both in public and private asylums, the victims of violence: we have therefore brought the subject thus prominently to the notice of the medical profession, for, were physicians generally ignorant of it, the discovery of fractures at the autopsy of a person who had at any time been deprived of his reason might possibly involve in unmerited disgrace the institution of which he had been an inmate.

THE publishers of *The Medical Times* intend to issue a large edition of the number for October 1 (the first number of the new volume), for distribution among the students of the medical schools of Philadelphia. The editors will be glad to receive prospectuses of the public and private course of medical instruction given in the city. The number will be extensively circulated,—a fact to which we would call the attention of advertisers.

OBITUARY.

PROF. GEORGE D. BLACKMAN.—The death of this distinguished Western surgeon, lecturer, and clinical teacher, is a serious loss to the profession which he adorned. Although by birth a New Englander, his lot was cast for purposes of extended usefulness in Ohio, where his reputation grew rapidly and his abilities and skill were universally recognized. At the time of his death he was but fifty-two years of age, thirty-six of which had been devoted to the pursuit of medicine, for he seemed to have entered upon its study at the early age of sixteen, while himself a school-teacher in New Jersey. He graduated in New York; but his health appears to have suffered by too great mental tension in the acquisition of medical knowledge, and he therefore assumed the duties of surgeon of a sailing-vessel, settling down for a while in London after making several voyages. Here he made the acquaintance of the most distinguished surgeons, faithfully devoted himself to the various clinical advantages offered him, and became a member of the Medico-Chirurgical Society. When he returned to his own country, he became a frequent and liberal contributor to medical literature, especially in able reviews of prominent surgical works, and translated Vidal de Cassis' treatise on Venereal Diseases. He was appointed, in 1854, Professor of Surgery in the Medical College of Ohio,—a position held by him at the time of his decease. He was also Surgeon to the Cincinnati, Commercial, and Good Samaritan Hospitals. Some of the rarest, boldest, and most successful operations ever performed in this country were skilfully executed by him, both in private practice and in the lecture-room; for in the latter he possessed not only the qualities of a brilliant lecturer, but also of a clear and earnest clinical teacher. During our late civil war he served as Surgeon of Volunteers. His death was ascribed to cirrhosis, with abdominal dropsy.

REVIEWS AND BOOK NOTICES.

RESTORATIVE MEDICINE. An Harveian Annual Oration delivered at the Royal College of Physicians, London, on June 21, 1871, by THOMAS KING CHAMBERS, M.D., etc. With Two Sequels. 12mo, pp. 85. Philadelphia, H. C. Lea, 1871.

The sarcastic question of one of the English Quarterlies, What have Americans done to aid the progress of civilization? could never have been asked by a physician of Great Britain. Earnest and true workers in science are of no country, and belong to but one party, wherever they may be; and we can point with as much pride to Louis, to Harvey, to Niemeyer, as to Rush, Mütter, Leidy, and others more strictly citizens of this country. It is not, therefore, surprising to find the utmost cordiality manifested between brethren, but we accept as a good omen the words of Dr. Chambers: "Across the Atlantic and Pacific there are bands of relatives whom we are much prouder to claim [than those in Europe], and to exhort to mutual love and affection in a tongue that recalls the fact of blood being thicker than water. This year the Oration, though delivered in England, shall be printed and published in America first." The essay contains so much material that little more than a superficial glance at it can be taken. After showing that previous practice of medicine was based upon the supposition that disease is something more than life or health, the author goes on to prove that present ideas of treatment involve the notion of disease being something less than life. "To support the strength of the patient" is the axiom of modern medicine, as evidenced by the increasing use of tonics, stimulants, and nutrients. Passing from this, he next offers a few words upon the probable action of alteratives, believing that they are related to one another in virtue of their acting upon the white fibrous tissues with which bones and trunk-nerves are sheathed. In cases of defective vitality of the periosteum and pericranium the iodides and bromides act like a charm, while they have little value in affections of other tissues. Then, glancing at that bugbear of physicians, inflammation, he stamps it with the following brands: pus is prematurely expelled germinal matter; heat, swelling, and redness are due to a loss of elasticity in the smaller arteries; urate of ammonia, uric acid, and oxalates in the urine, and excess of fibrin in the blood, are due to defective oxygenation; while the whole process is a perversion of nutrition, and is a cooling, not a kindling, of the furnace in respect to chemical power. This nomenclature is sufficient proof of the author's foremost position among medical men, and is in striking contrast to the ignorant pedantry of too many writers on this subject. Germs, skin-grafting, peristaltic action of capillaries, occupy in turn a portion of the discourse, and then comes a sentence to which we would ask especial attention: "Surely the chairs of materia medica would be better employed in teaching a class how to observe the action of medicines than in discussing varieties of cinchona bark or the shape of senna leaves." Believing that a practical knowledge of therapeutics and materia medica cannot be gained from lectures, we heartily endorse Dr. Chambers's opinion, as a means of correcting many of the pharmaceutical errors constantly committed by physicians.

Sequel 1st is a dissertation, in colloquial style, upon the details of Restorative Medicine, and includes a few words about Education, which is defined as a bringing out of powers, not a cramming of geese.

Sequel 2d treats of the much-vexed woman question; and we are informed that in London the women have stirred up a good deal of opposition among the pupils by entering as middle-aged women and snatching away prizes in competition with lads. With a few remarks upon life, spirit, and matter, the

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book closes. Advising the reader to examine it for himself, we thank Dr. Chambers for the most instructive and entertaining volume that it has been our pleasure to meet for some time.

ON THE PHYSIOLOGICAL EFFECTS OF SEVERE AND PROTRACTED MUSCULAR EXERCISE; with Special Reference to its Influence upon the Excretion of Nitrogen. By AUSTIN FLINT, JR., M.D., Professor of Physiology in the Bellevue Hospital Medical College, New York, etc. Reprinted from the *New York Medical Journal*, June, 1871. 8vo, pp. 91. New York, D. Appleton & Co., 1871.

In the *New York Medical Journal* for October, 1870, Prof. Flint published the result of some observations, based upon an examination of the urine of Mr. Weston, the pedestrian, during his walk of one hundred miles in twenty-one hours and thirty-nine minutes. Dr. Flint had no means of obtaining any reliable scientific information with regard to the amount and character of the food taken during that time, nor had he examined for purposes of comparison a specimen of the urine passed the day before the feat; while several weeks had elapsed after the walk before he could obtain a specimen of urine passed during twenty-four hours of comparative repose. He admits that the data were by no means those which he would have desired, and states also that he would never have published these results had he expected the opportunity on which the present paper is based. The results of these primary studies indicated a decided increase in the quantity of urea excreted during severe prolonged muscular exercise. It may be recollected by some that this paper of Dr. Flint's was made the subject of criticism by Dr. Anstie, the accomplished editor of the *British Practitioner*, in vol. v. p. 353 of that journal, in which Dr. Anstie claimed that the principal source of the urea was not the waste of muscle, but the nitrogenous food consumed by the pedestrian. In the present observations, however, every precaution was observed. Assisted by a corps of eminent and experienced gentlemen,—physiologists, chemists, physicians, and even surgeons,—Prof. Flint left nothing unprovided for. The quantity of food was carefully weighed, and thence the proportion of nitrogen ingested was calculated. The urinary and fecal excreta were all retained, weighed, and analyzed; carefully-prepared tables contain the results of such analyses. The experiments covered a total period of fifteen days,—five days previous to the walking feat, five days during it, and five days succeeding it; so that it is permitted the reader to make a comparison of the results of each period. Such a comparison of the amount of nitrogen ingested with that excreted under these circumstances of prolonged exercise shows a decided excess of the latter, while the correspondence of the actual loss of weight with the theoretical loss as calculated from the excess of nitrogen eliminated during the period of prolonged exercise is truly striking. Thus, the actual loss of weight during the five days of the walk was 1565.00 grammes. The total quantity of nitrogen discharged in the urea and fæces during this period, in excess of the nitrogen taken in with the food, was 40,030 grammes. Assuming that three parts of this nitrogen represent the waste of one hundred parts of muscular tissue, the loss of muscular tissue, calculated from the nitrogen excreted, would amount to 1334.33 grammes, leaving only 230.67 grammes, or less than half a pound, unaccounted for, which might be fat or water.

We feel assured of the accuracy of these experiments, and are satisfied to accept Dr. Flint's results. We confess also to a feeling of surprise that the experiments of Fick and Wislicenus, covering an entire period of less than twenty-five hours, should have been allowed as much weight as has been permitted them, entirely changing the pre-existing views on this subject. The theory which these observations are supposed to prove is thus stated by the authors:

"A bundle of muscle-fibres is a kind of machine consisting of albuminous material, just as a steam-engine is made of steel, iron, brass, etc. Now, as, in the steam-engine, coal is burnt in order to produce force, so, in the muscular machine, fats or hydrates of carbon are burnt for the same purpose; and in the same manner as the constructive material of the steam-engine (iron, etc.) is worn away and oxidized, the constructive material of the muscle is worn away, and this wearing away is the source of the nitrogenous constituents of the urine. This theory explains why, during muscular exertion, the excretion of the nitrogenous constituents of the urine is little or not at all increased, while that of the carbonic acid is enormously augmented; for in a steam-engine, moderately fired and ready for use, the oxidation of iron, etc. would go on tolerably equably, and would not be much increased by the more rapid firing necessary for working, but much more coal would be burnt when it was at work than when it was standing idle."*

Such a period is quite too short, even should the results coincide with those of a longer period. We presume, however, it may be objected by the opposite school of physiologists that the methods employed by Dr. Flint involve the possibility of certain inaccuracies which might still invalidate the results, and that the only infallible way of arriving at true results is to examine the excreta under circumstances of prolonged exercise, when no nitrogenous food whatever is ingested. We must admit, indeed, that such a method would alone be free from criticism, though, as we have already stated, we are quite satisfied to accept the conclusions of Dr. Flint as based on his own observations.

The sulphuric and phosphoric acids of the urine were increased during the walk, while the chloride of sodium was diminished,—the latter fact being probably due to the diminished amount of salt ingested during this period,—the close relation of the quantity of salt excreted to that ingested being pretty well determined.

TRAITÉ DE PATHOLOGIE INTERNE. Par S. JACCOUD, Professeur agrégé à la Faculté de Médecine de Paris, Médicin des Hôpitaux, etc. etc. Ouvrage accompagné de figures et planches en chromolithographie. Tome premier, 8vo. Paris, Adrien Delahaye, Libraire-Editeur.

(A TREATISE ON MEDICAL PATHOLOGY. By S. JACCOUD, Professor Agrégé at the Paris School of Medicine, Hospital Physician, etc. etc.)

The recent unsettled condition of Paris made itself felt very acutely in one respect at least in this country, and that was in the entire loss to us of French medical literature. Much as we may have deplored the suffering attendant upon a long siege, and more recently upon a condition of anarchy and misrule, it is probable that, after all, the absence of French magazines and books from our tables gave rise to the keenest regret.

The book, the title of which heads this notice, must have left Paris at least a year before the late Franco-Prussian war, but, so far as we know, has not been noticed to any very great extent by American journals. The first volume is all that has as yet reached us, and we do not know whether or not the succeeding volumes have been issued.

Many of our readers may perhaps be familiar with the author's previous works, especially with "Les Leçons cliniques médicales," which appeared in 1867, and which is deservedly popular in this country, as it is, we believe, in France. We understand that at one time one of our publishing houses entertained the proposal to publish a translation of these lectures; and we must regret that it was thought at last inexpedient to do so. Clinical lectures, when good, are universally popular, but, we are inclined to think, not so instructive as the severer treatises. In fact, we are not sure that they ought not to be considered as medical light reading, useful as adjuncts to systematic works, fixing certain points, it may be, more definitely in the student's mind, but never to be relied upon to the exclusion of the systematic treatises. Still, they are popular, and it is probable that M. Jaccoud's last work will not be so generally read as its predecessor.

The first part of the work on "Medical Pathology" is devoted to a consideration of general pathology. M. Jaccoud's views on inflammation are exceedingly simple. Attaching a certain amount of importance to the alterations in the composition of the blood, he nevertheless is disposed to attribute the larger share in the alteration which the tissues themselves undergo, to modifications in the cellular elements of these

* Fick and Wislicenus, On the Origin of Muscular Power, *London, Edinburgh, and Dublin Philos. Mag.*, January–June, 1866, vol. xxxi. p. 492.

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tissues. This modification consists in an exaggeration of the nutrition of these cells, the presence of which the microscope will generally enable us to recognize.

The most interesting part of the work to us are those chapters which treat of cerebral diseases and their diagnosis. The diagnosis of the seat and nature of cerebral lesions has generally been considered one of the most difficult problems submitted to the physician for solution. This difficulty has in part arisen from the fact that the symptoms which accompany tumors of the brain are in large measure dependent upon the tissue-changes which are excited by their presence in the cerebral matter immediately surrounding them, and in part because we are still ignorant of the functions of the different parts of the brain. Although he does not pretend to clear up all the doubt and uncertainty which still surround these diseases, M. Jaccoud has done much towards simplifying their diagnosis.

PRINCIPLES AND PRACTICE OF DENTISTRY, including the Anatomy, Physiology, Pathology, and Therapeutics of the Teeth, with Dental Surgery and Mechanism. By CHAPIN A. HARRIS, M.D., D.D.S., late President of the Baltimore Dental College, etc. Tenth Edition, Revised and Edited by PHILIP H. AUSTEN, M.D., Professor of Dental Science and Mechanism in the Baltimore Dental College. With 409 Illustrations. 8vo, pp. 794. Philadelphia, Lindsay & Blakiston, 1871.

It is, comparatively speaking, but a few years since all the information to be obtained upon the subject of dentistry was embraced within the limits of a short chapter in the surgical text-books. Dental pathology and mechanism were "terræ incognitæ," and dental therapeutics was limited to the application of one remedy for all morbid conditions, no matter what their nature. It is true it was suggested to make use of certain medicaments, in the hope that they might relieve the toothache, but the suggestion usually culminated in a final recommendation to employ the one potent remedy,—viz., extraction.

How great the change to-day! To comprehend fully the advances made in dental science, it is but necessary to glance over the pages of the handsome volume before us. Instead of a short chapter or two, we have here the "Principles and Practice of Dentistry" swelling into the magnificent proportions of a royal octavo, and the student is led, by a very proper arrangement of topics, from the consideration of the anatomy and physiology, through the pathology and therapeutics, of the teeth, to elaborate practical treatises on dental surgery and mechanism. This, as will be observed above, is the tenth edition of Dr. Harris' work, and in order that it should maintain the deservedly high reputation which it has for so long a period enjoyed, the editor determined to submit it to a careful and complete revision in all its parts. That this should be properly accomplished, he very wisely made a division of labor, assigning to himself the part on dental mechanism, and "the other parts to gentlemen of acknowledged proficiency in their respective departments."

The opening chapter of Part I. is devoted to the discussion of the "Development of the Cell Doctrine,"—a subject of absorbing interest; and the writer announces his "unqualified adherence" to the doctrine promulgated by Prof. Lionel S. Beale, as modified by Prof. Tyson, of this city, in his "Cell Doctrine." In the succeeding chapters of Part I. the descriptive anatomy of the oral cavity is given. Chapters IX. and X. are more especially occupied with the consideration of the teeth, their origin, mode of development, and intimate structure.

The pathology and therapeutics of the teeth and the associate parts are discussed at length in Part II. This embraces chapters on "Diseases of the Mucous Membrane and Gums," "Salivary Calculus," "Fluids of the Mouth," "Symptomatology of the Lips and Tongue," "Diseases of the Dental Pulp, Alveolar Processes, and Teeth."

The subjects of dental surgery and dental mechanism receive the most elaborate treatment at the hands of the gentlemen to whom was assigned the consideration of these topics. Particularly does this remark apply to Part IV., on Mechanics. The large experience of the editor has enabled him to treat this subject in an exhaustive manner. Discarding all that is obsolete, he has embodied all that is new, "omitting no subject of present or prospective importance." We would be glad if our space permitted us to review in detail this valuable contribution to prosthetic dentistry.

The concluding chapter of Part IV. is from the pen of Norman W. Kingsley, D.D.S., of New York, and treats of the "Defects of the Palatine Organs." The greater portion of this chapter is very properly devoted to the consideration of "Obturators and Artificial Palates,"—subjects which more especially claim the attention of mechanical dentists. The principles of their construction are fully set forth, and much useful information is imparted in reference to this important branch. The remarks upon staphyloraphy are as full as is requisite in a work of this character. In discussing this subject, the writer gives the anatomy of the parts involved in fissured palate, describes the various forms under which it occurs, and details the history of the operation and the various modifications in its performance which have from time to time been suggested.

In speaking of Langenbeck's method for closure of fissure of the hard palate, in which the periosteum is detached with the mucous membrane, and the gap closed by osseous tissue, he announces himself "skeptical" as to the results, and avows his determination to remain so until "an autopsy reveals that real osseous tissue has filled up the breach in the continuity of the palate-bone." Having witnessed the performance of the operation by Prof. Langenbeck, and having observed the results in one case under his care, we feel prepared to testify that the fissure was closed by osseous tissue. Dr. Whitehead, of New York, who has performed a number of these operations, states (*American Journal of the Medical Sciences* for July, 1871, p. 115) that "in at least two of my cases there was a permanent reproduction of bone in the periosteal flaps with which the cleft was closed." We think sufficient evidence has been gathered in the experience of those who have made this operation a special study, to warrant the conclusion that osseous tissue is produced in these cases.

In our examination of this edition we have been impressed with the fact that it is far superior to former ones, and we highly commend the plan adopted by the editor in its preparation.

In conclusion, we have to note some evidences of careless proof-reading, which mar the text. Happily they are few. The first presents itself on the title-page, in the title of Dr. Harris, which is given *M.D., D.S.S.*, instead of *M.D., D.D.S.* Dr. Lionel S. Beale is spoken of as Dr. Lionel Beale, and at page 117 as Mr. Beal.

The captions of the chapters in Part II. might be improved. Under the caption of "The Gums" are discussed "Cysts of the Teeth and Antrum" and "Tumors of the Jaws." In Part III. (Surgery) we find a chapter on "Diseases of the Maxillary Sinus." It seems to us that it would contribute to a better arrangement of subjects if those chapters relating to surgical affections of the jaws were transferred to Part III.

THE MODERN OPERATION FOR CATARACT. By HASKET DERBY, M.D., University Lecturer on Ophthalmology, and Surgeon to the Massachusetts Charitable Eye and Ear Infirmary. Pamphlet, 8vo, pp. 23. Boston, David Clapp & Son, 1871.

This pamphlet consists of a lecture before the medical students of Harvard University, on Graefe's "Modified" or "Peripheric Linear Extraction," giving a brief history of the operation, and minute and clear instructions for its performance, and the after-treatment of the patient.

The directions for after-treatment are interesting to all surgeons who operate for cataract, because we are told that they are "almost a literal summary of Graefe's views," as expressed in an article written a few months before his death, and may, therefore, be considered the final deductions of his vast experience; and because they are more minute than can be found in the text-books in general use, and differ in some particulars from those usually followed. They are briefly as follow: No atropia is to be used at first, and not before the third day, unless cortical matter has been left behind. A piece of soft linen is to be laid over the eyelids gently closed, the orbital cavity carefully filled with charpie evenly distributed, and the flannel bandage so applied as to exert uniform pressure suffi-

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cient to hold the edges of the wound in apposition, but not excessive; the other eye is to be closed with isinglass plaster. The dressing should be changed the evening of the operation, and again the next morning, and after that once in twenty-four hours, unless circumstances require it to be removed more frequently. In the first changes of dressing the wound is not to be exposed, but the upper lid raised slightly, to give a glimpse of the lower part of the cornea by the light of a candle. Little or no pain should follow the operation. If severe enough to make the patient restless, morphia should be injected subcutaneously in the temple. After the sixth hour there should be not only no pain, but no decided or continuous sensation of discomfort: if there be such sensation, the bandage should be changed; if it continues, morphia should be injected, and, if necessary, a second injection should be made; or if the patient be full-blooded, or his circulation excited, four or five ounces of blood are to be taken from his arm. Much importance is attributed to a night's sleep after the operation, and large doses of chloral at bedtime are recommended even when there is no pain. The most critical period is between the twelfth and twenty-fourth hours after the operation. If there is any, even slight, pain at this time, the bandage should be removed at once, and the eye examined. If the pain persists after gently washing the lids, removing the bandage, and injecting a little morphia, at least four ounces of blood should be taken from the arm. If there is much secretion from the eye, swelling of the lids, or chemosis, the danger of suppuration requires active measures. The "mitigated stick" (one part of nitrate of silver and two of saltpetre) is to be rubbed gently over the outside of the lids, and they are to be afterwards washed, first with salt water, and then with pure cold water, and thoroughly dried, and a *constrictive* bandage applied. If the patient is tolerably plethoric, six ounces of blood are to be taken from the arm, and a cathartic of calomel and rhubarb given. Morphia is to be injected if there is pain. When suppuration has fairly commenced, bloodletting is not advised, and leeches are said to do positive harm. The pressure bandage is to be removed, and the cauterization repeated every six hours. When the health is much reduced, quinine should be given. If there is gastric irritation, an emetic is to be given on the second day. Warm fomentations may be used between the applications of the bandage, but not for more than a quarter or half an hour at a time, and should be omitted entirely if followed by swelling. Graefe evidently used the latter application much less freely of late than formerly.

As Dr. Derby says, these energetic measures have been severely criticised, and are likely to meet with great opposition.

To the surgeon who, with a strong faith in Nature, has been accustomed to leave the result of his operations entirely in her hands, the very frequent removal of the bandage and repeated local treatment will savor of *nimia diligentia*, while calomel and rhubarb, general bleeding and emetics, will seem to many like a step in the wrong direction.

It must be remembered, however, that we are not advised to interfere with the course of the case unless it shows symptoms of dangerous deviation. We are told, too, that "when the patient is not particularly strong the venesection may be omitted," and may find comfort in the reflection that this exception will include a large proportion of cataract cases, particularly as met with in hospital practice. Whatever may be thought of the directions, there can be but one opinion of the weight of the authority from which they emanate.

BOOKS AND PAMPHLETS RECEIVED.

Essay on Growths in the Larynx: with Reports and an Analysis of One Hundred Consecutive Cases treated by the Author, and a Tabular Statement of all Published Cases treated by Other Practitioners since the Invention of the Laryngoscope. By Morell Mackenzie, M.D., M.R.C.P., Physician to the Hospital for Diseases of the Throat, etc. With numerous Illustrations in Chromo-Lithography and Wood-Engraving. 8vo, pp. xi., 263. Philadelphia, Lindsay & Blakiston, 1871.

A Treatise on Localized Electrization and its Applications to Pathology and Therapeutics. By Dr. G. B. Duchenne. Translated from the Third Edition of the Original by Herbert Tibbitts, M.D., Licentiate of the Royal College of Physicians of London, etc. With numerous Illustrations and Notes and Additions by the Translator. 8vo, pp. 322. Philadelphia, Lindsay & Blakiston, 1871.

Artificial Induction of Labor in Uræmia. By Samuel C. Busey, M.D. Pamphlet, pp. 62. Reprinted from the *National Medical Journal*, Washington. National Med. Journal Office, 1871.

Historical Memoranda relative to the Discovery of Etherization, and to the Connection with it of the late Dr. William T. G. Morton. Prepared by the Committee of Citizens of Boston chosen to raise a Morton Testimonial Fund. Pamphlet, 8vo, pp. 16. Boston, Rand, Avery & Frye, 1871.

Syphilitic Epilepsy. By Reuben A. Vance, M.D. Pamphlet, 8vo, pp. 16. Reprinted from the *American Journal of Syphilography and Dermatology*, July, 1871. New York, F. W. Christern, 1871.

The Physiological Action and Therapeutic Use of Chloral. By J. B. Andrews, M.D. Pamphlet, 8vo, pp. 24. Reprinted from the *American Journal of Insanity* for July, 1871. Utica, N.Y., Roberts, 1871.

Standard Supply Table of the Medical Department of the United States Army. 18mo, pp. 32. Issued from the Surgeon-General's Office, July 1, 1871, Washington, D.C.

GLEANINGS FROM OUR EXCHANGES.

APPLICATION OF A COLPEURYNTER FOR THE ARREST OF EPISTAXIS.—Dr. Closset (*Berl. Klin. Wochenschrift*, June 19, 1871, p. 294), under the name of Rhineurynter, recommends the use of an instrument, designed like a hard-rubber Eustachian catheter, which carries in its curved extremity a delicate sac. When the instrument is passed along the floor of the nasal chamber to the posterior nares, and the sac is inflated, it is found to successfully close the posterior nares. It is esteemed above Bellocq's canula, which is deemed inconvenient and more complicated.

SUDDEN DEATH FROM ILEUS.—Dr. Henschel (*Berl. Klin. Wochenschrift*, June 12, p. 285) narrates the following: "An old man, aged 80 years, enjoying good health, was suddenly prostrated, complained of intense pain over the right iliac region, had feculent vomiting, and died a few hours later. The autopsy revealed torsion of the small intestine three inches above the ileo-cœcal valve. Directly above the point of obstruction lay five gall-stones, varying in size from a bean to a hazel-nut. The gall-bladder contained thirty gall-stones. The common duct was pervious, and it was thought that the suddenness of the attack was due to the easy and presumably rapid entrance of several large gall-stones into the intestinal canal. There was no peritonitis, and but slight localized enteritis."

THE REMOVAL OF TUMORS FROM BONES.—Mr. James Paget recently communicated to the Royal Medico-Chirurgical Society (*The Doctor*, July 1, 1871, p. 136) upon the above subject. He urged the propriety of "removing the majority of non-malignant tumors growing in bones by simple extirpation or enucleation rather than by resection or amputation. It was shown that these tumors are as separate from the proper tissue of the bones as are fatty and most other innocent tumors from the connective tissue or other structures in which they grow, and that the same rules of operation are applicable to the one as to the other set of tumors. Examples were given of successful enucleation of fibrous, myeloid, cartilaginous, and osseous growths."

AN INSTRUMENT TO FACILITATE SKIN-GRAFTING, suggested by a Mr. Crips, a student of St. Bartholomew's, is thus described in the London *Lancet*, June 3, 1871: "It consists

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of a pair of curved scissors, which are provided on their concave surface with bent forceps. They are controlled by a lever, which descends with the separation of the blades, and rises when they are brought together. The movements of these several parts are so concerted that the forceps meet between and just below the blades, immediately before the closure of the latter, and then rise between them to such a height that whatever they have seized will be divided from its attachment when the blades actually meet. Thus the whole process of seizing a small portion of skin, separating, and raising it, can be almost simultaneously accomplished with one hand. The size of the severed piece of skin is proportionate to the force with which the forceps are pressed against the surface from which it is to be removed."

HYDRATED PHOSPHATE OF LIME IN THE SICKNESS OF PREGNANCY.—Mr. Metcalfe Johnson (*Med. Times and Gaz.*, July 1, 1871) recommends this substance in doses of from three to ten grains three times a day, suspended in water, and flavored. He has also tried the remedy dissolved in hydrochloric acid, in the dried state, and also made up into biscuits; but the first method has proved most satisfactory. His theory of its action is ingenious and interesting. He believes that the altered shape of the uterus, the altered nerve-relations, make an unusual demand upon nervous influence. Neuric force derives much of its source and nutrition from phosphates. Moreover, the child in its formation requires more phosphates for its new bones, and, if these are supplied at the expense of the brain and ganglionic nerve, debility, nervousness, and all the concurrent train must be brought about; hence arise those feelings of depression, peevishness, and irritability so frequently associated with the pregnant state. He has also been in the habit of using this form of phosphate in rickety children.

DETECTION OF XANTHINE IN URINARY CALCULI.—M. Lebon (*Lancet*, July 29, 1871), of the French Academy of Sciences, has found the following procedure useful for separating lithic acid from xanthine in urinary calculi, being founded upon the solubility of the latter in hydrochloric acid and the insolubility of lithic acid in the same liquid. Let, therefore, a fragment of the stone, reduced to powder, be boiled in hydrochloric acid, and the fluid be filtered. The insoluble portion of the latter is lithic acid, and the substance held in solution is xanthine. The nature of both substances may then be made out very easily by watching their usual reactions.

TREATMENT OF SCLEROSIS OF THE MIDDLE EAR BY USE OF STEAM.—Dr. H. N. Spencer, from employing Dr. Pardee's method of treating diseases of the middle ear by the use of steam (*St. Louis Med. and Surg. Jour.*, July, p. 294), confirms the latter gentleman's results, and narrates five cases of sclerosis (plastic inflammation) of the middle ear, having an average duration of ten years, which were markedly relieved after a course of treatment varying in time from twenty days to three months. From the language of Dr. Pardee (*loc. cit.*) we learn that "in the treatment of diseases of the tympanic cavity, its condition of moisture or of dryness should be considered on account of its relation to the acoustic requirements of the hearing-apparatus; and, when dryness exists, our therapeutic efforts should tend to re-establish the normal secretion, while, on the contrary, astringent remedial agents are proper only when there is hypersecretion."

ELECTROLYSIS IN SURGERY.—M. Groh (*Lancet*, from *Centralblatt*, No. 2) has made a series of experiments with differently constructed batteries. He finds that strong currents are best adapted for those cases in which it is desirable that rapid destruction should be effected, as in carcinoma; but for the treatment of small tumors, and where the object is to produce coagulation, those batteries should be used which consist of a small number of small plates. The pain accompanying the operation increases with the number of the elements. He is of opinion that in those cases in which it is desired to avoid pain as far as possible, the batteries that are used for galvano-caustic purposes are most appropriate. He believes that electrolysis is only a corrosion of the tissue; nevertheless, in a great number of cases, it acts better than any other caustic. In the first series of cases he reports that he treated six patients in twelve sittings with the catalytic current. None of these patients were narcotized, and the pain was found to be supportable up to twenty elements. One of them was a man, aged thirty-nine, with hydro-sarcocele. Immediately after the application, considerable diminution of the consistence of the tumor was observed; and after four days it had diminished one-half. In a number of other cases of strumous enlargements, melano-sarcoma, etc., in some, success attended the treatment, in others failure. In a second series of experiments, M. Groh endeavored to introduce arsenic and sodium into the body by means of the current, but obtained only negative results. He has used electrolysis in various modes: with strong currents applied for a short time, and with weak currents for a longer period; the former in cases of angioma, hemorrhoids, or swellings, scrofulous lupus, condylomata, and sarcoma, and in all instances with good results. The application of weak currents he thinks deserving of much more extended trial, as it has answered capitally in his hands.

PATHOLOGICAL ANATOMY OF HYDROPHOBIA IN THE DOG.—Prof. Rudnew, of St. Petersburg, contributes to the *Centralblatt für die Medicinischen Wissenschaften*, May 27, a short paper containing a few of the results of his investigations into the pathology of hydrophobia. In every instance in which a dog which had died of this disease was examined, the organs were the seat of decided lesions. This was particularly the case with the kidneys. In every case, he says, a well-marked parenchymatous inflammation of the kidneys was observed, the peculiarity of which was that the changes of the epithelia of the urinary tubules were equally distributed over the whole organ, the cortical portion of the kidney being equally affected with the pyramidal, so that all the conditions for the occurrence of uræmia were present. It is therefore probable that many of the symptoms of hydrophobia are really due to uræmia. The alteration of the epithelia is for the most part of a degenerative character. In those cases in which the disease had reached its greatest degree of development, the urinary tubules were entirely stripped of epithelial cells, but were filled with a granular and fatty detritus.

INTESTINAL OBSTRUCTION FROM A KNOT IN THE LOWER PART OF THE ILEUM.—The post-mortem appearances in a case of the above accident are thus described by Dr. Michael W. Taylor in the *British Medical Journal* for July 29, 1871:

"The small intestines were much distended, and concealed from view all other organs; their parietes were thin and transparent, without rupture, and not remarkably changed in color, until approaching the right iliac region, where a livid mass of strangulated bowel indicated the site of the obstruction. The lower portion of ileum along with the cœcum was removed for examination. A portion of the ileum, about twenty-two inches in length, was found tied in a running knot about two inches above the cœcum. The entanglement must have taken place in this wise: about twelve or fifteen inches of the lowest part of the ileum must have become coiled in a circular loop; the portion of the intestine directly above must have twined round from behind to the front of this coil; a knuckle or rather elbow of this portion of the bowel must then have accidentally slipped through the loop, and, having become embraced by it, on the tightening of the noose, have been caught in a slip-knot, or the same knot as that by which sailors hang their neck-tie. This included portion formed a sort of *cul-de-sac*, being bulged out into a globose form, with a semilunar outline, like a bag or pouch, measuring five inches by three, and marked on the surface with the depressions of six or eight sacculi or folds. It was drawn into puckers at the neck, but the little finger could be passed freely under the point of constriction; it contained fluid, and was not immoderately distended, and the color was heightened only and not livid. It was the cœcal or distal end of the ileum which constituted the knot, which was in one place of a dark brick-dust or brown color, and in another coil of a livid purple, and in parts black, soft, and gangrenous. This was the point at which the constriction was greatest. Below the knot the distention and dark color terminated abruptly. The cœcum and colon were white and collapsed. The stomach was empty; the gall-bladder full. No disease was found elsewhere."

ANTIDOTES FOR DIGITALIS-POISONING.—In the Hastings Prize Essay on Digitalis (*Brit. Med. Jour.*, July 29, 1871) Dr. Fothergill writes as follows of antidotes to digitalis:

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"Though digitalis-poisoning is no longer so common since a more accurate knowledge of its action has lent precision to its administration and its use, still cases might occur where, through misadventure or oversight, or perhaps some peculiar susceptibility in the patient, a condition of danger might arise from its administration. Such a condition must carefully be distinguished from attacks of cardiac syncope, the result of disease. If it were once ascertained that the danger was due to the drug, it would be necessary at once to stop its use; if it resulted from one huge dose producing acute poisoning, it might be advantageous to empty the stomach; in chronic poisoning, sickness is spontaneous. The use of agents must be resorted to which are known to paralyze the heart,—for instance, aconite. In experiments on the frog, though aconite did act on the heart after the poisonous effects of digitalis had been induced, still its action was far from being so marked as when digitalis was given in aconite-poisoning. In digitalis-poisoning, aconite may be resorted to as an antidote. From the action of the calabar bean, as described by Dr. T. R. Fraser, of Edinburgh, it is highly probable that it would act beneficially in the excessive action of digitalis."

MISCELLANY.

METEOROLOGICAL.—The mean temperature of the month of July, 1871, was 75.07° Fahr., and that of July, 1870, was 80.63°. The average of the mean temperature for the last forty-seven years is 76.20°. The highest temperature observed in July, 1871, was 97°, on the 11th inst., and the lowest 60°; presenting a range of 37°.

The rain-fall during July, 1871, was 6.81 inches, while in July, 1870, it was only 3.95 inches. The average rain-fall for the past thirty-four years is 3.87 inches.

The mean temperature during the month of August, 1871, was 76.35° Fahr., 2.42° less than that of August, 1870. The highest marking of the thermometer during the past month was 92.5°, on the 15th, and the lowest, 64°, on the 21st; presenting a range of 28.5°. The mean temperature of August for the past forty-seven years is 73.77°.

The total rain-fall for the past month was 5.97 inches, whilst that of August, 1870, was 5.12 inches. The average rain-fall for August of the past thirty-seven years is 4.48 inches.

THE THREE LARGEST GERMAN UNIVERSITIES.—We learn from the *Wiener Med. Presse* (No. 29, Sonntag, den 16. Juli, 1871) that the entire number of individuals, including professors, teachers, officials, and students, attached to these great schools, according to the recent summer announcements, is as follows: Berlin, 2113 regular matriculated students; Leipsic, 1803; Munich, 1107. The foreigners are—at Berlin, 456; at Leipsic, 972; at Munich, 149. They are distributed as follows: Of theological students, at Berlin there are 254, at Leipsic, 380, and at Munich, 91; in law, at Berlin there are 604, at Leipsic, 520, and at Munich, 343; in medicine, at Berlin there are 454, at Leipsic, 263, and at Munich, 262; in philosophy, at Berlin there are 801, in Leipsic, 640, and in Munich, 411. It must not be overlooked, however, that Leipsic and Berlin had almost 1000 of these students in the service of the country. Of these, 62 have perished either in the field or hospital, and 22 have received the decoration of the iron crown. In addition, in Berlin 15 professors hold the iron crown, and in Leipsic 4.

INTERESTING TO DRUGGISTS.—An apothecary (*N. Y. Times*, August 4, 1871) in one of the interior counties of New York has been sued for damages by the husband of a woman to whom he sold laudanum to be used as a beverage, and the supreme court has decided that the suit can be maintained. The plaintiff avers that the apothecary supplied his wife with the narcotic day by day for six months, knowing the use she made of it, and that he was put to great expense in repairing the injury thus occasioned to her bodily and mental health. The case is so similar to that of the liquor-seller supplying liquor to an habitual drunkard, that if the decision of the court is maintained by the court of appeals we may expect numerous suits by wives and husbands whose domestic happiness has been ruined by excessive drinking, against the immediate authors of the injury.

WOMAN'S HOSPITAL IN EDINBURGH.—Miss Jex Blake (*Brit. Med. Jour.*, July 22, 1871) has received £200 from a lady to form the nucleus of a fund for the clinical instruction of female medical students; the staff is also to be composed of ladies.

UNANSWERED.—The following is a copy of an advertisement taken from a Boston paper last spring: "Wanted, by a lady who has received a good medical education, an opportunity to act as physician or assistant physician in some charitable institution in Boston. No remuneration desired for services." The advertisement has remained to this day unanswered.

SEVERE EXAMINATIONS.—Twenty-seven out of sixty-eight candidates who presented themselves for examination before the Court of Examiners of the London College of Surgeons, on May 24, were rejected.

DR. CHARLTON BASTIAN.—The Medical Committee of University College Hospital, London, have recommended that the title of Physician be conferred upon this eminent biologist, pathologist, and clinician.

A DESCENDANT OF JENNER.—Mr. Stephen Jenner, grand-nephew and only surviving relative of Dr. Jenner (*British Medical Journal*, July 29, 1871), is now living, at the age of 75, in bad health, on ten shillings a week, in a poor cottage at Heathfield, England. The English journals, including the *Times*, are warmly urging his claims to a position on the Civil List. We question whether the world owes a debt of deeper gratitude to any individual than to Jenner. There is not a single individual who has been protected by vaccination from small-pox who does not owe him more than he can repay. We coincide, therefore, with those journals in that it is not a matter of obligation with the profession but with nations to provide for this descendant, who, it seems, was under medical training by his great uncle when the latter was suddenly struck with apoplexy at the breakfast-table, the nephew only being present. The unfortunate accident had the effect of arresting his medical studies, and, therefore, of cutting him off from a career which perhaps would have been useful, as well as have provided what he now lacks,—the means of subsistence.

THE PREVENTION OF MISTAKES IN THE ADMINISTRATION OF MEDICINES.—Mr. C. T. Bakes, of this city, in a forthcoming communication, proposes that a red label with raised sanded border should be used on bottles containing medicines with poisonous ingredients. The bottle for lotions is recommended to be of a triangular shape, of a deep black or blue color, and marked with serrations around the mouth-rim. By these aids it is hoped that mistakes may become of much less frequent occurrence.

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LIBRARY OF THE BROOKLYN CITY HOSPITAL.—Messrs. John Haslett and Alexander V. Blake have been appointed a committee to solicit contributions of medical periodicals and books, to start a library in the Brooklyn City Hospital.

From the last report, it appears that the institution is a charitable one, having an average of nearly *two hundred patients*, with four resident and eight visiting physicians and surgeons.

A medical library is very much needed; and, as there are no funds that can be used for the purchase of periodicals or books, the trustees venture to ask for donations from those upon whom they have no claim, but who yet may find it profitable to have their works and catalogues in the library of the medical staff, as they are constantly consulted by other physicians of the city.

SIMPLE METHOD OF MEASURING THE SPECIFIC GRAVITY OF SMALL QUANTITIES OF URINE.—In the *Medical News and Library* for August 1, 1871, from the Boston *Medical and Surgical Journal*, are published the following directions for this purpose:

"Add to the quantity of urine to be examined as many equal volumes of water as may be necessary to float the urinometer. Multiply the excess of the specific gravity of the mixture above 1000 by the whole number of volumes employed, add to it 1000, and the result will be the specific gravity of the urine."

THE COMPARATIVE FREQUENCY IN AMERICA OF VENEREAL DISEASE.—The English Minister at Washington, in behalf of the Lords of Her Majesty's Privy Council, had brought this matter, by circular, to the notice of the Executives of the several States,—the request for information being made with reference to an extension of the "Contagious Diseases Act of 1866" to the civil population of Great Britain.

HONORS TO PROF. CHRISTISON.—On the 29th of June (*Lancet*, July 8, 1871) the colleagues and friends of Prof. Christison assembled in the University of Edinburgh to witness the ceremony of presentation of a bust of the professor, to be added to the collection of the University Library. To appreciate the value of this distinction, it should be remembered that it is everyway exceptional to place a bust in the library during its subject's lifetime. A duplicate bust was at the same time presented to his family. Prof. Christison has held a prominent position in the University for forty-nine years.

MEDICAL ROUGHS.—This is the title given by the *Lancet* (July 29, 1871) to certain Edinburgh medical students who have "pursued the lady students about the streets with insulting cries of an obscene description, using the terms of anatomy to insure that their language, otherwise unintelligible to pure-minded women, might be understood by the victims of their foul abuse."

Such conduct can only meet with the disapproval of all honorable members of the profession, whatever their position with regard to the question of female physicians. Moreover, it is to be regretted that those who have been active participants in these proceedings are not able to see that they are really furthering the cause of the women by exciting the sympathy of those otherwise indifferent, and increasing the determination of their advocates to push their cause to a successful situation.

PHYSICAL CAUSE OF THE DEATH OF CHRIST.—According to Dr. Stroud ("Physical Cause of the Death of Christ," etc.), Christ died of cardiac rupture. Impalement on the cross for but six hours, it is held, was insufficient to have caused death in itself. The sudden and unexpected termination of our Saviour's sufferings points to a rupture,—a probability apparently confirmed by the escape of crassamentum and serum (blood and water) from the thrust of the doubting soldier. The spear probably pierced the lower part of the left side, opening the pericardium obliquely from below.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	Aug. 26.	Sept. 2.	Sept. 9.
Consumption	38	38	47
Other Diseases of Respiratory Organs	20	16	14
Diseases of Organs of Circulation	12	7	11
Diseases of Brain and Nervous System	40	28	36
Diseases of Abdominal Organs	53	57	53
Zymotic Diseases	23	20	23
Debility	28	20	18
Marasmus	13	12	15
Cancer	2	9	4
Casualties	9	8	9
Murder	2	1	1
Suicide	1	1	1
Old Age	8	8	9
Stillborn	16	13	24
Malformation	0	1	0
Sunstroke	1	0	0
Scrofula	4	1	0
Syphilis	1	1	0
Tetanus	1	0	3
Intemperance	0	1	2
Unclassifiable	8	9	12
Unknown	2	2	1
Totals	282	253	283
Adults	118	112	124
Minors	164	141	159

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 19, 1871, TO SEPTEMBER 4, 1871, INCLUSIVE.

MILLS, MADISON, SURGEON.—By S. O. 340, War Department, A. G. O., August 31, 1871, leave of absence extended thirty days.

MOORE, JOHN, SURGEON.—By S. O. 188, Headquarters Department of the East, C. S., granted leave of absence for twenty days.

CLEMENTS, B. A., SURGEON.—By S. O. 172, Department of Texas, August 23, 1871, granted leave of absence for thirty days, with permission to apply for an extension of fifteen days.

ALDEN, C. H., SURGEON.—By S. O. 91, Headquarters Department of the Lakes, C. S., granted leave of absence for thirty days.

WINNE, CHAS. K., ASSISTANT-SURGEON.—By S. O. 236, War Department, A. G. O., August 22, 1871, to report on the 1st of September prox. to the Commanding-General, Department of Dakota, for orders.

KOERPER, E. A., ASSISTANT-SURGEON.—By S. O. 171, C. S., Department of Texas, granted leave of absence for thirty days, with permission to apply for an extension of thirty days.

GIRARD, A. C., ASSISTANT-SURGEON.—By S. O. 171, Department of Texas, August 22, 1871, assigned to duty at Ringgold Barracks, Texas

POWELL, R., ASSISTANT-SURGEON.—By S. O. 317, War Department, A. G. O., August 16, 1871, relieved from duty in the Department of the Columbia, and ordered to proceed to New York City, reporting by letter, upon arrival there, to the Surgeon-General.

WILSON, WM. J., ASSISTANT-SURGEON.—By S. O. 339, Headquarters of the Army, A. G. O., August 30, 1871, granted leave of absence for three months.

DELANY, A., ASSISTANT-SURGEON.—By S. O. 103, Headquarters District of New Mexico, August 21, 1871, to proceed at once to Fort Bayard, N M., for duty at that post.

HARVEY, P. F., ASSISTANT-SURGEON.—By S. O. 50, Headquarters Military Division of the South, C. S., leave of absence extended thirty days.

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INDEX.

Abdomen, "phantom" tumors of, 449.
wounds of, 95, 96.
Abdominal tumor with derangement of lymphatic system, cases of, by W. Pepper, M.D., 170.
Abortionist, a peripatetic, note from J. J. Reese, M.D., 180.
Abscess, axillary, 437.
of the hand, 457.
intercranial, recovery from, 186.
mammary, 295.
of mastoid cells, 266.
of prostate, 316.
scrofulous, 297.
Absorption of insoluble matter in mammals, 451.
Abuse of insane hospitals, 208.
of medical charities, the, 438.
Academy of Natural Sciences, transactions of, 12.
Accident insurance, 148.
Accommodation, partial paralysis of, 278.
Acetate of potash, its application to microscopy, 306, 345, 382, 386.
Acid, gallic, in albuminuria, 149.
oxalic, poisoning by, 458.
tannic, in albuminuria, 149.
Aconitum napellus, action of, 346.
Active Principles of Plants in their Chemical, Physiological, Pharmacological, and Toxicological Relations, by Dr. Aug. Husemann and Dr. Theod. Husemann, review of, 29.
Addison's disease, 30.
pathology of, 29.
and sclerodermia, 238.
Adductor muscles of thigh, contraction of, 337.
Adenoid vegetations of nasal cavity, 182.
Advertisements, improper, 387.
Against cramming, 228.
Agnew, D. Hayes, on radical cure of hernia, 17.
Aid to the sick and wounded, 207.
Air, compressed, effects of, 29.
Albuminoid disease of kidney, 369.
of liver and spleen, 436.
of spleen, liver, and kidney, 302.
Albuminuria, production of, by introduction of nitrogenized substances into the blood, 66.
tannic and gallic acids in, 149.
Albuminuric retinitis, 346.
Alcohol, influence of, on temperature of brain, 30.
in paralytic fever, 47.
Alden, C. H., M.D., opium poisoning treated by belladonna, 294.
Alive in a coffin, 228.
Allen, Harrison, M.D., on inflammation of the long saphenous vein, 433.
Althaus, Julius, M.D., Treatise on Medical Electricity, review of, 45.
Aluminum, hydrated chloride of, 87.
Alumni associations, annual meetings of, 208.
of our medical schools, 220.
Amaurosis from tobacco, 241.
American Medical Association, 227, 307.
committee of, 347.
Transactions of, review of, 245.
Amity between medical officers of English army and navy, 308.
Ammonium, bromide of, in acute rheumatism, 137.
Amœboid movement of pigment-cells, 30.
Amory, R., M.D., Physiological Action of Nitrous Oxide, review of, 244.
Amputation at hip-joint, 71.
of hand for epilepsy, 224.
Amyloid degeneration of liver, 436.
Anæsthesia, production of, by pressure on vagus nerve, 138.
Analgesia in vertebral caries compared with that in hysteria, 185.
Anatomy, Practical, A Manual of Dissections, by Christopher Heath, F.R.C.S., Edited by W. W. Keen, M.D., review of, 45.
A Sketch of the Early History of Practical, by W. W. Keen, M.D., review of, 162.
Anchylosis, 397.
coxo-femoral, 405.
of jaw from fracture of zygomatic process, 297.
of knee, 437.
Aneurism, dissecting, of aorta, 264.
of posterior tibial artery, traumatic, 374.
Aneurisms, popliteal, 375.
Angina pectoris, pathology of, 187.
Anglo-American ambulance corps, report of, 67.
Annual commencements, 247.
Annual Report of the Surgeon-General U. S. A. and the Medical and Surgical History of the War, 118.
Anosmia, 203.
Antiperistaltic movements, 327.
Antiseptic treatment of contagion as illustrative of the germ-theory of disease, 85.
Aortic valves, disease of, 344.
supplementary series of, 30.
Aphonia resulting from pressure on the recurrent laryngeal nerve, 284.
Apothecaries not doctors, 308.
Application of localized movements, the, to the treatment of certain functional nervous disorders, by Wm. R. Fisher, M.D., 74, 112, 134.
Army hospitals, construction of, on a new plan, and order from War Department, 127.
medical organizations of France and Prussia, 41.
U. S., official list of changes of stations and duties of officers of Medical Department of, 68, 88, 108, 128, 148, 168, 188, 208, 228, 248, 268, 288, 308, 328, 348, 368, 388, 408, 428, 448, 468.
Arnica in pneumonia, 265.
Arterioles, condition of, in disease of kidney, 86.
Artery, axillary, unhurt in wound of axilla, 426.
Ashhurst, John, Jr., M.D., rupture of the lung without injury of the thoracic parietes, 256.
Asphyxia in mines, 393.
of a new-born child, transfusion in, 31.
Atheroma of arteries and veins, with loss of electro-contractility of muscles of one leg, 283.
Atmospheric pressure, largely-increased, effects of, on man, 29.
Atrophy of liver, acute, 227.
of nerve-cells of medulla and pons, 66.
Atropia in opium poisoning, 277.
Attfield, John, Ph.D., Chemistry, General, Medical, and Pharmaceutical, review of, 342.
Auspitz on the absorption of insoluble matter in mammals, an abstract, by Louis A. Duhring, M.D., 451.

Bacot, John, death of, 45.
Bacteria, origin and increase of, 226.
Balanitis, 397.
Baldwin, L. K., M.D., coin in bronchus, 237.
erectile cancroid of vagina, 93.
Bard, Cephas L., M.D., case of strychnia poisoning successfully treated by bromide of potassium, 316.
Barker, Fordyce, M.D., Bloodletting as a Therapeutical Resource in Obstetric Medicine, review of, 266.
Barnes' dilators, discussion upon their use, 300.
Bartholow, Roberts, constant current in chronic nephritis, 7.
Barton, John Rhea, M.D., obituary of, 163.
Bastian, Dr. Charlton, 467.
Beale, Lionel S., M.D., The Mystery of Life review of, 404.
Bean tea, death from, 344.
Beck, J. R., M.D., mammary abscess and its treatment, 295.
Bell, John, M.D., note on Adirondack mineral water, 144.
on vaccination, 232.
Belladonna in nocturnal incontinence of urine, 105.
in opium poisoning, 294.
poisoning, opium in, 377.
in tubular nephritis, 149.
Bellum in pace, 148.
Benevolent associations, medical, 439.
Berlin, clinical teaching at, 367.
Biddle, John B., M.D., Materia Medica for the Use of Students, review of, 266.
Biological and Microscopical Section of Academy of Natural Sciences, 201, 243, 265, 285, 345, 382.
Bismuth, subnitrate of, 426.
Bitter ending, a, 148.
Blackman, Prof. George D., death of, 462.
Bladder, cast of, 386.
female, removal of a male catheter from, 39.
removal of pessary from, 246.
Blake, Miss Jex, 367, 447.
Blanford, G. Fielding, M.D., Insanity and its Treatment, review of, 304.
Blood, constitution of, 385.
Corpuscle, Cellular Structure of the Red, by J. G. Richardson, M.D., review of, 183.
corpuscles, development of human, 205.
formation of, 447.
white, migration of, 258.
crystals, new, 367.
Bloodletting, review of, 285.
Board of Public Charities, the, 178.
Body and Mind, by Henry Maudsley, M.D., review of, 384.
Boiler-explosion, 427.
Bones, chemical composition of, in general paralysis, 105.
condition of, in the insane, 461.
removal of tumors from, 465.
Book notices and reviews, 84, 102, 123, 145, 161, 182, 202, 224, 244, 265, 304, 324, 342, 383, 402, 422, 443, 462.
Boston City Hospital, Reports of, review of, 161.
Boylston prizes, 427.
Brain, bullet in, 426.
injury to the base of, results of, 246.
right and left sides of, 78.
Breasts, milk of opposite, 30.
Bright's disease, iodide of potassium in, 255.
pathology, diagnosis, and treatment of, 271, 290.
ulcers a cause of, 334.
Bromal hydrate, 14.
Bromide of potassium in croup, by G. B. Kieffer, M.D., 215.
in strychnia poisoning, 316.
in tetanus, 346.
Bromides, the, in the summer complaints of children, 352.
Bronchus, foreign body in, 373.
nickel coin in, by L. K. Baldwin, M.D., 237.
of wild duck, rupture of, by W. H. Winslow, M.D., 255.
Bryonicin, discovery of, 67.
Bumstead, Freeman J., M.D., Pathology and Treatment of Venereal Diseases, review of, 145.
Burns, earth as a dressing in, 309.
Byford, W. H., M.D., Treatise on the Chronic Inflammation and Displacements of the Unimpregnated Uterus, review of, 383.

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Cæsarean section after death, 47.
Calabar bean, 347.
in tetanus, 138, 146, 195, 346, 418, 455.
Calcification of brain-cells by commotion, 226.
Calculus, detection of xanthine in, 466.
impacted in urethra, 13.
removal of fragments of, by siphon-suction, 366.
vesical, 222.
two cases of, and remarks, 194.
Camphor in hospital gangrene, 458.
Cancer of abdominal and mediastinal lymphatic glands, 172.
chloral in, 282.
of liver, stomach, and pancreas, 222.
osteoid, 382.
of ovary, peritoneum, and uterus, 202.
of pancreas, 365.
primary, of skin, with secondary deposits involving thoracic and abdominal viscera, 283.
of thyroid gland, 187.
and tuberculosis, 247.
of uterus, etc., 263.
Cancroid, erectile, of vagina, case of, by L. K. Baldwin, M.D., 93.
Candid confession, a, 228.
Carbolic acid in carbuncles, 298.
death from burning by, 67.
in otorrhœa, 207.
Carbolized atmosphere in the treatment of blood-poisoning, 425.
Carbonic acid, action of, on blood, etc., 86.
oxide, physiological effects of, 137.
transfusion of blood in poisoning by, 278.
Carbuncles, carbolic acid in, 298.
Carcinoma of stomach, 229.
Cardiac disease, case of valvular, 89.
valvular orifices, law of relative areas of, 67.
Cardiff giant, the, 447.
Carter, J. L., M.D., opium poisoning treated by atropia, 277.
Case of successful ovariotomy, by J. H. Grove, M.D., 38.
Cast of female bladder, 386.
Cataract, the Modern Operation for, by Hasket Derby, M.D., review of, 464.
traumatic, case of, 57.
Von Graefe's operation for, 57.
Cause of the sick and wounded in France, the, 79.
Cauterization in diphtheria, 166.
Cell Doctrine, the, its History and Present State, by James Tyson, M.D., review of, 13.
Cellular Structure of Red Blood-Corpuscle, by J. G. Richardson, M.D., review of, 183.
Cellulitis, pelvic, 391, 409.
after lithotripsy, 303.
Cementum, hypertrophy of, 383.
Cephalotribe, the use of the, 147.
Cerebral disease, obscure, a case of, by J. Cummiskey, M.D., 296.
Chairs of dentistry in medical schools, 281.
Chambers, Thomas King, M.D., an Harveian Annual Oration delivered at the Royal College of Physicians, London, review of, 462.
Change of Life in Health and Disease, by Edw. John Tilt, M.D., review of, 423.
Charities, the abuse of medical, 438.
Chemical action of mucous membranes, 72.
food, 66.
Chemistry, General, Medical, and Pharmaceutical, by John Attfield, Ph.D., review of, 342.
Child, acute desquamative nephritis in very young, 96.
born without occipital bone, 47.
without arms and legs, 226.
Childhood and Infancy, Diseases of, a Practical Treatise on the, by Thomas Hawkes Tanner, M.D., review of, 422.
Children, a Practical Treatise on the Diseases of, by J. Forsyth Meigs, M.D., and William Pepper, M.D., review of, 84.
raw meat in diarrhœa of, 31.
on Wasting Diseases of, by Eustace Smith, M.D., review of, 204.
Chinese physicians, 108.
Chisolm, J. J., M.D., anterior luxation of semilunar bone, excision of, 335, 364.
exophthalmic goitre, 21.
Chloral hydrate, 105, 447.
in hydrophobia, 108.
poisoning from, 23, 447.
in tetanus, 307.
in cancer, 282.
and cod-liver oil, 405.
consumption of, 288.
fatal cerebral congestion caused by, 185.
influence of, on temperature of brain, 30.
notes on, by H. Y. Evans, M.D., 94.
in pertussis, 226.
Chloralum, 186, 245.
Chloroform, on death from, 78.
deaths from, 187.
Chloroform, influence of, on temperature of brain, 30.
new test for, 146.
poisoning, note on a case of, by A. Fricke, M.D., 277.
Sir W. Lawrence and, 147.
in tetanus, 106.
Cholera evacuations, microscopic objects in, 146.
infantum, 395.
Chorea, ether spray in, 196.
minor, epidemic of, in Prague, 166.
strychnia in, 377.
Choroiditis suppurativa, case of, 57.
Christ, physical cause of the death of, 468.
Christison, Prof., honors to, 468.
Cicatrix from burn, 358.
Ciliary movement, 286.
Circular No. 4, review of, 225.
Circulation, physiology and pathology of, 405.
Cleft palate, 155.
Clinical examinations, 187.
reports, Jefferson Medical College, 77, 154, 257, 297, 318, 337, 374.
University of Pennsylvania, 115, 155, 194, 296, 357, 375, 397, 436.
Cobra poison, 448.
Coca, erythroxylon, action of, on urine, 56.
Code of Health of the School of Salernum, by John Ordronaux, LL.D., review of, 324.
Cod-liver oil and chloral, 405.
Coffee-grain twenty years in the nose, 201.
College of Physicians of Philadelphia, Library of, 338, 359.
Colpeurynter, use of, in epistaxis, 465.
Colton, J. J., M.D., on Physiological Action of Nitrous Oxide, review of, 244.
Commune, medicine under the, 328.
Communicability of syphilis by vaccination, 238.
Comparative merits of medical schools of Vienna and Berlin, 407.
Compensation in railway accidents, 288.
Completion of the first volume, the, 459.
Compressed air, effects of, 29.
Compulsory vaccination, 32.
Condurango, 348, 406.
Condy's fluid, 187.
Congress water, physiological effect of, 352.
Conium, effects of, in epilepsy, by M. Gonzalez Echeverria, M.D., 252.
maculatum, 30.
preparations of, 165.
Constitutional versus morbid manifestations, 377.
Consulting physicians' fees, 126.
Consumptives, ought they to marry? 143.
Contagion, cream as a means of, 108.
intimate pathology of, 186.
milk as a medium of, 400.
Contagious diseases act, 167, 208.
Contagiousness of tuberculosis, 40.
Contraction of aorta at semilunar valves, 323.
Contributions to our Knowledge of the Nerves of the Tadpole's Tail, by E. Klein, review of, 343.
Convention, a national medical, 107.
Cornea, lymph-spaces of, 327.
reproduction of its epithelium, 405.
Coroner's office, 167.
Correction, 126.
Correlation of Zymotic Diseases, by A. Wolff, F.R.C.S., review of, 403.
Correspondents, difficulties of army medical, 61.
Corson, Hiram, M.D., Food for Infants, review of, 424.
Cosmetics, danger from, 68.
Coxalgia, effects of, on growth of the limb, 86.
Craniotomy, 165.
case of, 217.
child crying after, 15.
Cream as a means of contagion, 108.
Cremation, 87.
Critique upon the Parasitical Investigations of Hallier, Zürn, and Keber, with especial relation to Typhus and Typhoid Fevers, Smallpox, and Revaccination, by R. Weise, review of, 45.
Croup, bromide of potassium in, 215.
and diphtheria, 346.
treatment of, 31.
Cummiskey, J., M.D., case of nervous disease, 215.
case of obscure cerebral disease, 296.
Cyst, dermoid, of ovary, 223.
of ovary, 303.
Cysts, hydatid, 242.
Cystic disease of breast, 437.
distention of pancreatic duct, case of, 153.
tonsil, 324.
tumor of lower jaw, 78.
Cysticerci in brain, 107.
Cysticercus, intraocular, 165.
Cystitis, acute, after lithotripsy, 303.

Da Costa, J. M., M.D., clinical lectures by, 129, 449.
Medical Diagnosis, review of, 13.
Dactylitis Syphilitica, by R. W. Taylor, M.D., review of, 424.
Darby, John T., M.D., Hair as a Suture and Ligature, review of, 343.
Davis, T. D., M.D., a history of an epidemic of purulent ophthalmia, 432.
Death, Chinese theory of sudden, 268.
from the development of gas within abdomen after ingestion of bean tea, 344.
sudden, in puerperal cases, 421.
tests for determination of, 87.
Deaths of distinguished medical men, 16.
Decapitation by hanging, 48.
Deformed pelvis, induction of labor in a case of, 31.
Degree of Ph.D. at the University of Pennsylvania, 107.
Delegates to American Medical Association, 268.
to the Medical Society of Pennsylvania, 268.
Delivering in arm-presentations, new method of, 298.
Delivery of after-coming head, new method for, 105.
early, in narrow pelvis, 136.
Dentistry, Principles and Practice of, by Chapin A. Harris, M.D., D.D.S., review of, 464.
Derby, Hasket, M.D., the Modern Operation for Cataract, review of, 464.
Dermatology abroad, letters from L. A. Duhring, M.D., 43, 82, 121.
Dermoid cyst, fragment of bone from, 201.
cyst of ovary, 223.
Diabetes, changes in nervous system associated with, 203.
contributions to the pathology and therapeutics of, 345.
mellitus, 418.
treated with sulphite of soda, by G. B. Kieffer, M.D., 356.
Diagnosis, Medical, with Special Reference to Practical Medicine, by J. M. Da Costa, M.D, review of, 13.
by sense of smell, 318.
Diarrhœa of children, raw meat in, 31.
infantile, treatment of, 105.
Died at their posts, 168.
Diergardt, Baron, munificence of, 108.
Diet-table, German army, 267.
Digitalis, 105.
contraindications to the use of, 458.
poisoning, antidotes for, 466.
theory of the mode of action and indications for the use of, 446.
Dilatation of veins of trunk and upper extremity, case of, 4.
Diphtheria, 371, 382.
cauterization in, 166.
and croup, 346.
sesquichloride of iron and glycerine in, 426.
Diphtheritic paralysis simulating locomotor ataxia, 185.
Diseases of the Spine and Nerves, review of, 224.
Disinfectants, 167.
Dislocation of elbow, reduction of, etc., 117.
of vertebræ, 117.
Dispensary for skin-diseases, 159
Diuretics, action of certain, on urine in health, 203.
Division of white blood-corpuscles, 185.
Divorce case, the Mordaunt, 25.
Divorces in America, 127.
Doctors, disagreements among, 168.
Double baby, death of, 407.
Drinking-water, contamination of, 125.
Dropsy, acute, 404.
scarlatinous, treatment of, by baths, 47.
Druggist sued, a, 407.
Druggists, interesting to, 467.
legislation to regulate, 247.
Drunkenness in New York, 126.
Duhring, Louis A., M.D., Auspitz on the absorption of insoluble matter in mammals, 451.
letters from, on dermatology abroad, 43, 82, 121.
Dunster, E. S., M.D., retirement of, 367.
Dust-shower, report on, 142.
Dynamics of Nerve and Muscle, by Charles Bland Radcliffe, M.D., review of, 444.
Dysentery, 315.
chronic, ipecac in, 47.
Dystocia from male infants, 156.
from syphilitic induration of cervix uteri, 187.

Ear, treatment of sclerosis of middle, 466.
Earth as a dressing in burns, 309.
Echeverria, M. Gonzalez, M.D., on the effects of conium in epilepsy, 252.
Eclampsia, puerperal, 146.
Edinburgh prizes, the, 308.
Elbow-joint, wound of, 317.
Electricity, Medical, Theoretical, and Practical, and its Uses in the Treatment of Paralysis,

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Neuralgia, and other Diseases, by Julius Althaus, M.D., review of, 45.
Electrolysis in surgery, 466.
Electro-muscular contractility of muscles, loss of, with atheroma of arteries and veins, 283.
Elephantiasis Arabum, 346.
Elliot, George T., M.D., obituary of, 226.
Elliot's, Dr., successor, 188.
Enchondroma of rib, 284.
Enlargement of Medical Times, 43.
Entozoa, rare, in the hog, 298.
Epilepsy, amputation of hand for, 224.
conium in, 252.
unusual case of, 160.
Epileptic guinea-pigs, 106.
Epistaxis, use of a colpeurynter in, 465.
Epithelioma, 457.
of penis, 364.
Epithelium of cornea, reproduction of the, 405.
Ergotin, subcutaneous injection of, 327.
Erratum, 316.
Erysipelas, 405.
iodide of potassium in, 222.
Ether, an attack on, 87.
spray in chorea, 196.
sulphuric, death from, 167.
used as an intoxicating beverage, 16.
Evans, H. Y., M.D., case of complicated labor, 115.
notes on chloral, 94.
Eyeball, ossific deposit in, 247.
Eyelid, operation for restoration of, by Dr. Levis, 58.
Eyes, movements of the, 398.
Examinations, the clinical element in, 108.
severe, 467.
Excellent choice, an, 148.
Excision of hip-joint for caries, statistics of, 14.
of joints, 182.
of knee-joint, 31.
of os calcis, by Hunter McGuire, M.D., 6.
of tongue, 85.
of ulna, 66.
Exercise, influence of, on elimination by the kidneys, 78.
Exophthalmic goitre, 21.
Exostosis on frontal bone, 443.
Experimentation, curious, 228.
Experts, examination by, 127.
Explanation, an, 126.
Exsection of head of humerus for chronic rheumatic arthritis, 186.
External iliac, ligation of, 217.
Extirpation of a kidney in man, 14.

Fallopian tube, dropsy of, 263.
False colors, 227.
Fecal tumors, 142.
Fees of doctors of the ancient Irish, 368.
Female doctors in Finland, 387.
medical students in Edinburgh, 288, 428.
Fergusson, Sir William, Bart., a System of Practical Surgery, review of, 103.
Fibrin, note on, by Louis S. Stillé, M.D., 102.
the origin of, by Louis S. Stillé, M.D., 413.
Fingers, contraction of, 258.
Fisher, G. J., M.D., letter on double monsters, 376.
Fisher, William R., M.D., application of localized movements in certain functional nervous disorders, 74, 112, 134.
Fiske prizes, 427.
Fissure of enamel of tooth, 265.
Fistula in ano, 155.
biliary, 227.
Flint, Austin, Jr., M.D., on the Physiological Effects of Severe and Protracted Muscular Exercise, review of, 463.
Floating kidney, pathology of, 326.
Flower, William Henry, M.D., an Introduction to the Osteology of Mammalia, review of, 443.
Fœtal monstrosity with protrusion of abdominal contents, 324.
Food, chemical, 66.
improper, for infants, 191.
for Infants, by Hiram Corson, M.D., review of, 424.
Forceps, torsion, 22.
Foreign body in bronchus, 237.
in nose, 318.
substance in the bladder, 39.
Foundling hospitals, 299.
Fracture, compound comminuted, of leg, slow recovery from, case of, by Elliott Richardson, M.D., 95.
compound, of the orbit, 418.
concealed, of tibia, 243.
of external condyle of humerus, with external lateral luxation of bones of forearm, 237.
of the leg, treatment of, 209.
of both radii and of patella, 237.
of skull, 283.
compound depressed, 77.
Fracture of skull, depressed, 224, 457.
of tibia, ununited, 12.
of zygomatic process, 297.
Frænum linguæ, ulceration of, in pertussis, 426.
Fricke, A., M.D., chloroform poisoning, 277.
Fungal theory of zymotic disease, the, 459.
Fungus of ear, 318.
of hooping-cough, 125.

Galvanization in chronic metritis, 7.
Ganglia of sheaths of extensor tendons of toes, 318.
Ganglion, treatment of, 441.
Gangrene, hospital, camphor in, 458.
Gelsemium, 87.
General tuberculosis, case of, 322.
Generation, spontaneous, 425.
Genital organs, malformation of, 76.
Germ theory of disease, 85.
Gland-cells, contractile, of skin of frog, 367.
Glycerine in diphtheria, 426.
Goitre, exophthalmic, 21.
Gold-headed cane, the, 141.
Gonorrhœa, permanganate of potassa in, 267.
treatment of, 426, 442.
Goodell, William, M.D., on monstrosities, 232.
letter from, on double monsters, 441.
Graefe's successor, 367.
Gross, S. D., M.D., clinical lecture on treatment of strangulated hernia, 1, 49, 109.
Gross, S. W., M.D., retention of urine from impassable stricture, 35.
treatment of inflammation of limbs, 132.
Grote, Mr., the historian, 428.
Grove, J. H., M.D., a case of successful ovariotomy, 38.
Guarana, 77.
Gummy tumor of thigh, 167.
Gunshot wound of abdomen, recovery from, 96.
of axilla—escape of axillary artery, 426.
of liver, jejunum, and kidney, 95.
Guy's Hospital Reports, review of, 443.
Gynæcological Record, the, by Joseph G. Pinkham, M.D., review of, 162.

Habeas corpus, 259.
Hæmatocele, 107.
Hæmatometra, 107.
Hæmaturia, intermittent, urine of, 284.
by James Tyson, M.D., 429.
Hair as a Suture and Ligature, by John T. Darby, M.D., review of, 343.
Hall, A. D., M.D., ophthalmoscope in medical practice, 234.
Handbook of Medical Microscopy, by J. G. Richardson, M.D., review of, 145.
of Therapeutics, by Sidney Ringer, M.D., review of, 13.
Hanging, decapitation by, 48.
Harelip, double and complicated, 155.
Harlan, George C., M.D., catarrh of tympanum from use of Thudichum's nasal douche, 396.
Harris, Chapin A., M.D., D.D.S., Principles and Practice of Dentistry, review of, 464.
Harvard Medical School, 367.
Harvey, American statue to, 167.
Haynes, Francis L., M.D., the hypodermic use of sulphate of quinia, 456.
Health and Wealth of City of Wheeling, review of, 265.
Heart, development of, 106.
hypertrophy of, 344.
and dilatation of, with patulous mitral valve, 283.
physical examination of, in children, 146.
Heat to spine in uterine hemorrhage, 47.
Heated term of 1870, 16.
Heath, Christopher, F.R.C.S., a Manual of Dissections, review of, 45.
Heavy damages, 107.
Hemiplegia, an affection of the joints appearing in the course of, 106.
Hemorrhage and anæmia of the lungs, production of, by injuries to the base of the brain, 246.
post-partum and secondary treatment of, 68.
uterine, arrested by heat to spine, 47.
Hepatic duct, jaundice from obstruction of, 39.
Hereditary syphilis, 156.
Hernia, inguinal, 457.
radical cure of, 17.
scrotal, reduction of, by position, 95.
congenital, 437.
strangulated, treatment of, 1, 49, 109.
umbilical, 417.
Hewson, Addinell, M.D., on earth as a dressing in burns, 309.
on torsion forceps, 22.
treatment of fractures of the leg, 209.
Hill, R. Gardner, F.S.A., on Lunacy, its Past and its Present, review of, 102.
Hip-joint, amputation at, for malignant disease of thigh, by F. F. Maury, M.D., 71.
disease, 417.
Hip-joint, excision of, for caries, statistics of, 14.
Hippophagy, 88.
Histology of Minute Blood-Vessels, Report on, by Bvt. Lieut.-Col. J. J. Woodward, Assistant Surgeon U. S. Army, review of, 84.
Hodgkins' disease, case of, 91.
Holmes, O. W., M.D., Mechanism in Thought and Morals, review of, 384.
Honors and appointments, 448.
to medical men, 199.
Hooping-cough, 426.
chloral in, 226.
fungus of, 125.
Hospital appointment, 168.
building, economy in, 342.
Children's, notes from, 436.
for Deformities and Diseases of Nervous System, notes from, 116.
Episcopal, ward notes from, 138, 217, 457.
Pennsylvania, ward notes from, 95, 117, 137, 176, 237, 277, 316.
Philadelphia, ward notes from, 76, 96, 216, 398, 418.
practice, notes of, 12, 23, 39, 57, 76, 95, 115, 137, 154, 176, 194, 216, 237, 257, 277, 296, 316, 336, 357, 374, 397, 417, 436, 457.
Reports of Boston City, review of, 161.
St. Mary's, notes from, 195, 336.
Wills Ophthalmic, notes from, 278.
Woman's, in Edinburgh, 467.
Hospitals, army, 127.
Hubbard, Lorenzo, M.D., foreign body in bronchus, 373.
Humerus, deformed, after ostitis, 223.
scirrhous tumor of, 201.
Hunt, William, M.D., traumatic rupture of urethra, 173.
Hunter, John, 448.
Husemann, Drs. Aug. and Theod., on Active Principles of Plants, review of, 29.
Hutchinson, James H., M.D., on albuminoid disease of kidney, 369.
on carcinoma of stomach, 229.
on jaundice caused by pressure of glands in ductus choledochus communis, 313.
Huxley on materia medica (editorial), 42.
Hydatid cysts, 242.
mole, 282.
Hydramyle, 404.
Hydrocele, 397.
of neck, 322.
Hydrocephalus, 364.
Hydrophobia, clinical lecture on, 33, 51.
in the dog, pathological anatomy of, 466.
statistics of, 14.
treatment extraordinary, 108.
Hymen, unruptured, complicating labor, by P. S. Leisenring, M.D., 395.
Hypertrophy of cementum of tooth, 243.
of muscular walls of small arteries in chronic Bright's disease, 86.
splenic and lymphatic, a case of, by H. C. Wood, Jr., M.D., 91.
Hypodermic use of the sulphate of quinia, the, by Francis L. Haynes, M.D., 456.
Hysteria, 457.

Icaja, 107.
Ileum, obstruction from a knot in, 466.
Ileus, sudden death from, 465.
Impacted calculus in urethra, 13.
Improper food as a cause of death and disease in infants, by W. M. Welch, M.D., 191.
Incised wound of deltoid, 316.
Incontinence of urine, 187.
as a symptom of retention, 258.
belladonna in, 105.
iodide of iron in, 258.
Increase in size of Medical Times, 59.
Induction of labor in a case of deformed pelvis, 31.
Inebriate Asylum, New York State, 305.
Infanticide in London, 405.
Infantile paralysis, 169, 189.
Infants, improper food for, 191.
mortality among, 307.
Infirmary or hospital? 388.
Inflammation, 238.
of the limbs, treatment of, by S. W. Gross, M.D., 132.
of the long saphenous vein, by Harrison Allen, M.D., 433.
Influence of atmosphere upon physical signs, 318.
Ingenious, 168.
Insane, condition of the bones in the, 461.
Insanity and its Treatment, by G. Fielding Blanford, M.D., review of, 304.
clinical instruction in, 208.
Instruction, medical, in Vienna, 10.
Insult, alleged, to the profession in Italy, 368.
Intermarriage of Relations, review of, 243.
Intermittent fevers, cause of, 65.
hæmaturia, 284, 429.

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International Medical Congress, 248.
Intestinal obstruction from a knot in the ileum, 466.
Intolerance of iodide of potassium, by James D. McGaughey, M.D., 396.
Invagination, extensive, of ileum, cœcum, and colon, by William Pepper, M.D., 434.
of large and small intestine, 302.
Iodide of iron in incontinence of urine, 258.
of potassium in Bright's disease, 255.
and subnitrate of bismuth, 426.
in erysipelas, 222.
intolerance of, 396.
Ipecac in chronic dysentery, 47.
Iron, sesquichloride of, in diphtheria, 426.

Jaccoud, Prof. S., a Treatise on Medical Pathology, review of, 463.
Jaundice caused by pressure of enlarged glands upon the ductus choledochus communis, by James H. Hutchinson, M.D., 313.
from obstruction of hepatic duct, 39.
Jefferson Medical College, clinical reports from, 77, 154, 257, 297, 318, 337, 374.
Jenner, a descendant of, 467.
Johnson, R. H., M.D., on traumatic tetanus, 372.
Journalistic debts, 220.

Karsten, Prof., and the boys, 387.
Keen, W. W., M.D., a Sketch of the Early History of Practical Anatomy, review of, 162.
Keloid tumors, 347.
Keyes, E. S., M.D., Syphilis of the Nervous System, review of, 162.
Kidney, albuminoid, 369.
cystic, 223.
extirpation of, in man, 14.
granular, 223.
Kidneys, chronic disease of, polyuria in, 66.
elimination by, influence of exercise on, 78.
hypertrophy of muscular walls of small arteries in chronic disease of, 86.
Kieffer, G. B., M.D., bromide of potassium in croup, 215.
diabetes mellitus successfully treated with sulphite of soda, 356.
Klein, E., Contributions to our Knowledge of the Nerves of the Tadpole's Tail, review of, 343.
Knee, amputation at, 182.
anchylosis of, 437.
Knee-joint, excision of, 31.
Knife-blade in the chest, 86.
Knox, Robert, the Anatomist, by Henry Lonsdale, review of, 225.

Labor complicated by fibrous cord across os uteri, 115.
by hymen, 395.
external pressure in cases of lingering, 105.
induction of, in a case of deformed pelvis, 31.
mechanism of, 47.
ovarian tumor complicating, 67.
Lachrymal disease, practical suggestions for the treatment of, 106.
Lardaceous disease, 426.
Lawrence, Sir William, and chloroform, 147.
Lead in drinking-water, 105.
poisoning, chronic and mercurial tremors of, 417.
Lecture, clinical, on the advantages of suspending the limb in the treatment of fractures of the leg, by Addinell Hewson, M.D., 209.
on two cases of albuminoid disease of the kidney, by James H. Hutchinson, M.D., 369.
on the use of gallic and tannic acids in albuminuria with hypersecretion, and of belladonna in chronic tubular nephritis, by H. C. Wood, Jr., M.D., 149.
on carcinoma of stomach, by James H. Hutchinson, M.D., 229.
on the use of earth as a dressing in severe burns, by Addinell Hewson, M.D., 309.
on radical cure of hernia, by D. Hayes Agnew, M.D., 17.
on treatment of strangulated hernia, by S. D. Gross, M.D., 1, 49, 109.
on hydrophobia, by J. Forsyth Meigs, M.D., 33, 51.
on infantile paralysis, by John S. Parry, M.D., 169, 189.
on intermittent hæmaturia, by James Tyson, M.D., 429.
on monstrosities, by William Goodell, M.D., 232.
on a case of œdema of one lower limb following typhoid fever, and on the divers varieties of external swellings occurring after low fevers, by J. M. Da Costa, M.D., 129.
on two cases of facial paralysis, by H. C. Wood, Jr., M.D., 289.
Lecture, clinical, on pelvic peritonitis, by John S. Parry, M.D., 389, 409.
on a case of latent pleurisy, and on a case of valvular disease of the heart, by A. Stillé, M.D., 69, 89.
on a case of progressive muscular sclerosis, by William Pepper, M.D., 229, 349.
on spurious and "phantom" tumors of the abdomen, by J. M. Da Costa, M.D., 449.
on a case of dilatation of veins of trunk and of upper extremity, by Alfred Stillé, M.D., 4.
on cases of unusual vascular murmurs within the chest, by Alfred Stillé, M.D., 249, 269.
Lee, Benjamin, suspension in spinal affections, 53.
Leeches and mustard, 267.
Leeds, Prof. A. R., on carbonic oxide, 137.
Legg, J. Wickham, M.D., a Guide to the Examination of the Urine, review of, 28.
Leisenring, P. S., M.D., unruptured hymen complicating labor, 395.
Letter G, the, 282.
from Vienna, 10.
from Wheeling, from Jas. E. Reeves, M.D., 62, 160.
Leucæmia lienalis, pathology of, 187.
Leukæmia, 385.
Levis, R. J., M.D., operation for restoration of eyelid, 58.
Library of the Brooklyn City Hospital, 468.
of the College of Physicians of Philadelphia, 338, 359.
of Pennsylvania Hospital, 378.
of Philadelphia Hospital, 381.
Liebreich, Dr. R., Atlas of Ophthalmoscopy, review of, 384.
Life insurance, 168, 188.
Ligation of arteries as a means of treatment for inflammation, 132.
of external iliac artery, 217.
Lime, hydrated phosphate of, in the sickness of pregnancy, 466.
Lithotrity, 182.
Liver, albuminoid disease of, 436.
enlargement of, from amyloid degeneration, 436.
glycogenic function of the, 346.
syphilitic nodule in, 436.
the wandering, and its relations, 246.
waxy, 344.
Lobus spigelii, enlarged, 344.
Local longevity, 407.
Lodge, John W., M.D., case of syphilitic vaccinia, 150.
Longet, M., death of, 327.
Lonsdale, Henry, Robert Knox the Anatomist, review of, 225.
Lumbricoid in posterior nares, 181.
Lunacy, its Past and its Present, by Robert Gardiner Hill, F.S.A., review of, 102.
Lung, congenital absence of one, 86.
rupture of, 256.
Luxation, anterior, of semilunar bone—excision—by J. J. Chisolm, M.D., 335, 364.
lateral, of bones of forearm, 237.
of shoulder-joint, 357.
Lymph-spaces of the cornea, 327.
Lymphatic glands, enlarged, 374.
varix, case of, 347.
Lympho-sarcoma of mediastinum, 263.

Maimed pensioners, 32.
Malarial disease, sulphites in, 151.
Malformation, congenital, of genital organs, by Wharton Sinkler, M.D., 76.
Malignant disease of thigh, amputation at hip-joint for, 71.
unusual form of, 115.
Malpractice, a case of alleged, by John J. Reese, M.D., 73.
alleged, 327.
ether in, 88.
heroic, 16.
the law of, 99.
Walsh *v.* Sayre, 73.
Mammary abscess and its remedy, by Joseph R. Beck, M.D., 295.
glands, supernumerary, 187.
Marine hospital service, the, 97.
Married doctress, a, 187.
Mason, L. D., M.D., Rubber Air Cushion in the Treatment of Complicated Fractures, review of, 266.
Massachusetts, health of, 305.
Mastoid cells, abscess of, 266.
Materia medica, geographical map of, 427.
Huxley's opinion of (editorial), 42.
for the Use of Students, by John B. Biddle, M.D., review of, 266.
Mathiessen, Dr. Augustus, death of, 64.
Mattocks, Brewer, M.D., Minnesota as a Home for Invalids, review of, 305.
Maudsley, Henry, M.D., Body and Mind, review of, 384.
Maury, F. F., M.D., amputation at hip-joint, case of, 71.
Maxilla, inferior, cystic tumor of, 78.
Mayo, Thomas, M.D., F.R.S., obituary of, 196.
M'Bondou, 107.
McGaughey, J. D., M.D., intolerance of iodide of potassium, 396.
McGuire, Hunter, M.D., excision of os calcis, 6.
M. D. F. R. S., 368.
Meat-preserving processes, new, 420.
Mechanism of labor, 47.
in Thought and Morals, by O. W. Holmes, M.D., review of, 384.
Medical benevolent associations, 439.
corps of the navy, the, 80.
Jurisprudence of Insanity, by I. Ray, M.D., review of, 403.
knights, 300.
literature and the war, 107.
profession, the, and the temperance question, 419.
of Paris during the Prussian siege, 348.
reserve force in Russia, 67.
roughs, 468.
schools of London, 227.
service in the navy, 179.
Society of District of Columbia, 304.
statistics, 139.
students, behavior of, 141.
teaching in Philadelphia, 218.
World, the, 367.
Medicine, the Practice of, by Thomas Hawkes Tanner, M.D., F.L.S., review of, 28.
Medicines, the prevention of mistakes in the administration of, 467.
Medico-Chirurgical Transactions, review of, 182, 202.
Medulla, atrophy of nerve-cells of, 66.
of bones, hyperplastic growth of, in leukæmia, 385.
Meigs, J. Forsyth, M.D., clinical lecture on hydrophobia, 33, 51.
on Diseases of Children, review of, 84.
Meningitis, tubercular, 216.
of spinal cord, 88.
Mercurial tremors and chronic lead poisoning, 417.
Mercury, action of, in children, 366.
action of, on liver, 318.
the cholagogue action of, 188.
Meteorological, 268.
Meteorology of April, 307.
of May, 347.
of June, 387.
of July, 467.
of August, 467.
Metritis, chronic, constant current in, 7.
Metrorrhagia, treatment of, 58.
Microscopic objects found in cholera evacuations, 146.
specimens, acetate of potash as a preservative of, 306, 345.
Microscopical memoranda, by Dr. Newlenz, 200.
Microscopy, Handbook of Medical, by J. G. Richardson, M.D., review of, 145.
Migration theory, 186.
Milk, deterioration of, in feeding-bottles, 425.
as a medium of contagion, 400.
of opposite breasts, 30.
skimmed, use of, as exclusive diet in disease, 19, 213.
Miller, Dr. William Allen, death of, 64.
Mineral water, Adirondack, note on, by John Bell, M.D., 144.
Minnesota, health of, 305.
Miscellany, 15, 32, 47, 67, 87, 107, 126, 147, 167, 187, 208, 227, 247, 267, 287, 307, 327, 347, 367, 387, 406, 427, 447, 467.
Mitchell, S. Weir, M.D., on skimmed milk as exclusive diet in disease, 19, 213.
Wear and Tear, or Hints for the Overworked, review of, 402.
Modern surgery, 32.
therapeutics, 319.
and the methods of advancement, 238.
Molluscum fibrosum, anatomy of, 146, 203.
Monsel's salt, use of, 317.
Monsters, double, letter from G. J. Fisher, M.D., 376.
letter from William Goodell, M.D., 441.
Monstrosities, lecture on, 232.
Moral epidemics, 197.
Mordaunt divorce case, the, 25, 427.
Morgue in Philadelphia, 108.
Mormon precautions, 267.
Morphia, hypodermic use of, 160, 264.
influence of, on temperature of brain, 30.
poisoning from hypodermic use of, 165.
Morris, J. C., M.D., on tobacco, 211.

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Mortality in Philadelphia, 16, 32, 48, 68, 88, 108, 127, 148, 168, 188, 208, 228, 248, 268, 288, 308, 328, 348, 368, 388, 408, 428, 448, 468.
of Wheeling, W. Va., 62.
Mouth, congenital deformity of, 201.
tuberculous ulcers of, 106.
Movements, localized, application of, in nervous disorders, 74, 112, 134.
Mucous disease, 287.
membranes, chemical action of, 72.
Mucus-glands of stomach, 386.
Multilocular tumor of ovary, 202.
Munificent donation, 227.
donations to hospitals, 208.
Murmurs, vascular, unusual, within the chest, 249, 269.
Muscle, transverse, striation of, 426.
Muscles, intercostal, function of, 345.
Muscular power of uterus in parturition, 31.
tissue, nutrition of, 385.
Mushroom, a gigantic, 107.
Mütter lectureship, 287.
Mystery of Life, the, by Lionel S. Beale, M.D., review of, 404.
Myxoma of the arm, 344.
multiple cystoid, of chorion, 282.

Nævus, vascular, of face, 296.
National university, 208.
Nature of life, 148.
Nature's economy, 248.
Naval delegates to American Medical Association, 287.
staff-rank, 167.
Navy, the medical corps of, 80.
Necrology of the past year, 120.
Necrosis, cases of, 357.
of femur, 397.
and removal of entire petrous portion of temporal bone, 336.
of phalanges, 437.
of inferior turbinated bone, 401.
Nephritis, acute desquamative, in infant, 96.
scarlatinous, 47.
tubular, belladonna in, 149.
Nephrotomy, 446.
Nervous disease, a singular case of, by J. Cummiskey, M.D., 215.
peculiar, 404.
disorders, functional, localized movements in, 74, 112, 134.
System, Critical and Experimental Researches on the Influence of the, in the Dilatation and Contraction of the Blood-vessels, by Gustav Roever, review of, 103.
Neumann's theory of the development of blood-corpuscles, 205.
Neuralgia of arm, etc., relieved by faradisation, 116.
Neuroma amyelinicum, congenital sacral, 364.
of sciatic nerve in rabbit, 202.
of stump, 154.
Newton, "Dr.," mobbed, 87.
Niemeyer, death of, 307.
Nitrous Oxide, Physiological Action of, by R. Amory, M.D., review of, 244.
Physiological Action of, by J. J. Colton, M.D., review of, 244.
Nocturnal incontinence of semen, treatment of, 326.
Norton, Arthur Trehern, F.R.C.S., Affections of Throat and Larynx, review of, 424.
Not appreciated, 321.
Notes of Hospital Practice, 76, 95, 115, 137, 154, 176, 194, 216, 237, 257, 277, 296, 316, 336, 357, 374, 397, 417, 436, 457.
Notice to contributors, 401.
Nurses, monthly, selection of, 15.
Nutrition, lesions of, following wounds of the periphery, 405.
of muscular tissue, 385.

Oakum as a surgical appliance, 447.
Obituary, 45, 64.
Obstruction of hepatic duct, jaundice from, 39.
Occipital bone, child born without, 47.
Œdema of one lower limb, following typhoid fever, and on the divers varieties of external swellings occurring after low fevers, clinical lecture on, by J. M. Da Costa, M.D., 129.
Official list of changes of stations and duties of officers of the Medical Department of the U. S. Army, 68, 88, 108, 128, 148, 168, 188, 208, 228, 248, 268, 288, 308, 328, 348, 368, 388, 408, 428, 448, 468.
Open doors, 199.
Ophthalmia, purulent, a history of an epidemic of, by T. D. Davis, M.D., 432.
Ophthalmoscope in medical practice, by A. D. Hall, M.D., 234.
Ophthalmoscopy, Atlas of, by Dr. R. Liebreich, review of, 384.
Opium culture, 159.
new alkaloids of, 78.
Opium poisoning, a case of, treated by belladonna, by C. H. Alden, M.D., 294.
treated by hypodermic injections of sulphate of atropia, by J. L. Carter, M.D., 277.
production of, in Tennessee, 427.
Oppolzer, Prof., death of, 327.
Oppolzer's Lectures on Special Pathology and Therapeutics, review of, 64, 123.
Ordronaux, John, LL.D., Code of Health of the School of Salernum, review of, 324.
Organizations, army medical, of France and Prussia, 41.
Os calcis, excision of, by Hunter McGuire, M.D., 6.
Ossific deposit in the eyeball, 247.
Osteoid cancer, 382.
Osteology of Mammalia, an Introduction to, by William Henry Flower, M.D., review of, 443.
Ostitis, humerus deformed after, 223.
Otorrhœa, carbolic acid in, 207.
treatment of, by spirits of wine, 431.
Ott, Isaac, M.D., action of coca, 56.
physiological effect of Congress water, 352.
Ovarian tumor, complicating labor, 67.
double, 202.
Ovariotomy, a case of successful, 38.
Ovary, cancer of, 263.
dermoid cyst of, 223.
Oxalic acid, poisoning by, 458.
Oxygen, effect of inhalation of, on pulse, 246.

Packard, J. H., M.D., Philadelphia Medical Register and Directory, review of, 305.
Pancreas, cancer of, 365.
Pancreatic duct, case of cystic distention of, 153.
secretion, physiology of, 125.
Paralysis, chemical composition of bones in general, 105.
in children, 181.
facial, strychnia in, 277.
infantile, 169, 189.
pseudo-hypertrophic, 46.
muscular, of Duchenne, 229, 349.
of upper left sympathetic nerves, 289.
Paralytic fever, quinine and alcohol in, 47.
Parasitical Investigations of Hallier, Zürn, and Keber, with Especial Relation to Typhus and Typhoid Fevers, Smallpox, and Revaccination, a Critique upon the, by Dr. Rudolf Weise, review of, 45.
Parry, J. S., M.D., on infantile paralysis, 169, 189.
on pelvic peritonitis, 389, 409.
Parturition, mortality from, relation of size of child to, 66.
muscular power of uterus in, 31.
Patella, fracture of, 182.
Pathological Society of Philadelphia, proceedings of, 201, 222, 242, 263, 282, 302, 322, 344, 364, 382, 401, 422.
Pathology of Addison's disease, 29.
diagnosis and treatment of the different forms of Bright's disease of the kidney, by Jas. Tyson, M.D., 271, 290.
Special, and Therapeutics, Oppolzer's Lectures on, review of, 64, 123.
a Treatise on Medical, by Prof. S. Jaccoud, review of, 463.
and Treatment of Venereal Diseases, by F. J. Bumstead, M.D., review of, 145.
Pelvis, contracted, difficult labor from—craniotomy, 217.
deformed, induction of labor in a case of, 31.
narrow, early artificial delivery, 156.
new method of delivering after-coming head in contracted, 105.
Penis, epithelioma of, 364.
Pennsylvania Hospital, the, 261.
the change in the surgical staff of the, 342.
library of, 378.
State Medical Society, annual meeting of, 358, 382.
Pensioners, maimed, 32.
Pepper, William, M.D., cases of abdominal tumor, 170.
case of cystic distention of pancreatic duct, 153.
on Diseases of Children, review of, 84.
extensive invagination of the ileum, cœcum, and ascending and transverse colon in an infant six months old—death on the fifth day, 434.
on a case of progressive muscular sclerosis, 229, 349.
scirrhus of the pylorus, etc., 274.
Peritonitis, pelvic, 389, 409.
Permanganate of potassa, 23.
Pertussis, chloral in, 226.
fungus of, 125.
ulceration of frænum linguæ in, 426.
Pessary in bladder, 246.
Pharmacopœia, the United States, 59, 119.
Philadelphia County Medical Society, transactions of, 63, 102, 142, 159, 181, 221, 240, 264, 300.
Hospital, library of, 381.
Medical Directory, review of, 305.
Phosphorus as a remedy in skin-diseases, 337.
poisoning, 227, 266.
Photographic Review of Medicine and Surgery, review of, 46.
Physical examination of heart in children, 146.
Physicians and druggists, 126.
in the United States, 386.
Physiological action of Congress water, by Isaac Ott, M.D., 352.
of leaves of erythroxylon coca on excretion of urine, by Isaac Ott, M.D., 56.
of Nitrous Oxide, review of, 244.
Effects of Severe and Protracted Muscular Exercise, the, by Austin Flint, Jr., M.D., review of, 463.
Physiology of pancreatic secretion, 125.
practical, 147.
Pigment-cells, amœboid movement of, 30.
Piltz, or fungus of hooping-cough, 125.
Pinkham, Joseph G., M.D., the Gynæcological Record, review of, 162.
Pirogoff,—is he dead? 148.
Placenta, retention of, 307.
Plants, the Active Principles of, in Various Relations, by Drs. Aug. Husemann and Theod. Husemann, review of, 29.
Pleurisy, chronic, dilatation of veins of upper extremities in, 4.
latent case of, 69.
Pneumonia, 395.
arnica in, 265.
Pneumothorax occurring in a case of phthisis, 176.
Poison, cobra, 448.
Poison ordeal of Gaboon, M'Bondou, 107.
Poisoning by dyeing aniline black, 85.
from hydrate of chloral, 23, 447.
antidotes for digitalis, 466.
by hypodermic use of morphia, 165.
by oxalic acid, 458.
undetected, 419.
of children by whiskey, 156.
by yew-berries, 86.
Polypus nasi, 155.
naso-pharyngeal, 425.
Polyuria in chronic renal disease, 66.
Pons, atrophy of nerve-cells of, 66.
Post-partum hemorrhage, treatment of, 68.
Potassa, permanganate of, 23.
Potassium, iodide of, 222, 255, 396, 426.
Pregnancy, duration of, 147.
pseudo-, 398.
sickness of, hydrated phosphate of lime in, 466.
tubal, 166.
vomiting in, 47.
Presbyterian Hospital, 247.
Prevention of scarlet fever, 47.
Prize questions, Boylston medical, 427.
Fiske medical, 427.
Proliferous cysto-sarcoma, 242.
Prostate gland, function of, 246.
Prussian examinations, strictness of, 227.
Pseudo-hypertrophic paralysis, 46.
Pseudo-membranous bronchitis, 322.
Pseudo-pregnancy, 398.
Psychological Section of British Medical Association, 108.
Puberty, early, 404.
Puerperal cases, sudden death in, 421.
convulsions, 142.
eclampsia, 146.
fever, external examination a preventive of, 404.
woman, thrombosis in, 76.
Pulmonic elastic tissue, characters of, 285.
Pulse, effect of inhalation of oxygen on, 246.
Pupil, contraction of, with partial paralysis of accommodation, 278.
Purulent inflammation of joints in erysipelas, 405.
Pus, the formation of, 347.
Pyæmia, cases of, 159.
sulphites in, 267.

Quackery, 88.
Quinia, hypodermic use of, 456.
toxic action of, 446.
Quinine and alcohol in paralytic fever, 47.

Radcliffe, C. B., M.D., on Diseases of the Spine and Nerves, review of, 224.
Dynamics of Nerve and Muscle, review of, 444.
Radical cure for colic, 288.
of hernia, 17.
Railway accidents, 188.
Railways in England and America, 87.
Rand, B. Howard, M.D., on permanganate of potassa, 23.

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Rape and specula, 88.
Rattlesnake-venom, therapeutic use of, 101.
Raw meat in diarrhœa of children, 31.
Ray, I., M.D., Treatise on the Medical Jurisprudence of Insanity, review of, 403.
Reamputation at the hip, case of, 177.
Reese, John J., M.D., a case of alleged malpractice, 73.
note from, 180.
Reeve, J C., M.D., removal of a male catheter from the female bladder, 39.
Reeves, James E., M.D., Health and Wealth of the City of Wheeling, review of, 265.
letter from, 62, 160.
medical notes, 315, 371, 394, 415.
Regurgitation, aortic, temporary, 76.
Relapsing fever, 63.
and diabetes, 418.
in Edinburgh, 106.
statistics of, 222.
Removal, 168.
of a male catheter from the female bladder, by J. C. Reeve, M.D., 39.
Removals of physicians, 148.
Report of Surgeon-General U. S. A., 118.
to the Surgeon-General U.S. A , review of, 84.
Reports of Boston City Hospital, review of, 161.
Reproduction of spinal cord in the frog, 30.
Renal disease, polyuria in chronic, 66.
Researches on Influence of Nervous System in the Dilatation and Contraction of Bloodvessels, by Gustav Roever, review of, 103.
Responsibility of physicians, 408.
Restorative Medicine, an Harveian Annual Oration delivered at the Royal College of Physicians, London, by Thomas King Chambers, M.D., review of, 462.
Retention of urine from impassable stricture, by S. W. Gross, M.D., 35.
incontinence as a symptom of, 258.
Retina, disease of, 241.
Retinitis, albuminuric, 346.
Retirement of Mr. Cock, 288.
Revaccination by secondary lymph, 442.
Reviews and book notices, 13, 28, 45, 64, 84, 102, 123, 145, 161, 182, 202, 224, 244, 265, 304, 324, 342, 383, 402, 422, 443, 462.
Rheumatism, new cure for, 348.
notes on treatment of acute, 137.
Rhoads, Edward, M.D., obituary of, 163.
Richardson, Elliott, M.D., fracture of leg, 95.
Richardson, J. G., M.D., Cellular Structure of the Red Blood-Corpuscle, review of, 183.
a Handbook of Medical Microscopy, review of, 145.
note from, 200.
Ricinin not an alkaloid, 67.
Rifle-ball, encysted, effects of, on rib, 401.
Ringer, Sidney, M.D., Handbook of Therapeutics, review of, 13.
Ringworm contracted from a pony, 306.
Rodgers, Dr. J., the Present State of Therapeutics, review of, 13.
Roever, Gustav, Researches on the Influence of the Nervous System over the Blood-vessels, review of, 103.
Roman prisons, 148.
Rothrock, J. T., M.D., supernumerary little fingers, 373.
West Pittston disaster, 393.
Rubber Air Cushion in Treatment of Disease, review of, 266.
Rumored resignation, 168.
Rupia, 457.
Rupture of the lung without injury of the thoracic parietes, by John Ashhurst, Jr., M.D., 256.

Salutatory, 9.
Sanitary laws, 157.
Santonin, solution of, 306.
Scarlatina, 394.
prevention of, 47.
treatment of, by baths, 47.
Scarlatinous nephritis, 47.
Science and homœopathy, 188.
Scirrhus of pylorus, case of, with remarks on the electric excitation of the stomach and the use of the stomach-pump in dilatation of that organ, by William Pepper, M.D., 274.
withering, of breast, 297.
Sclerodermia and Addison's disease, 238.
Sclerosis, diffused cerebral, 437.
of the middle ear, treatment of, by steam, 466.
progressive muscular, 229, 349.
Scurvy, treatment of, 368.
Secondary hemorrhage, treatment of, 68.
Selection of monthly nurses, 15.
Sentiment versus Science, 399.
Sewing-machines, power for, 87.
Sex of fœtus in utero, test of, 48.
Siamese twins, health of, 88.
Sick and wounded in France, the cause of, 79.
Simpson, Dr. A. R., his election, 87.
Singular decision, 167.
Sinkler, Wharton, M.D., congenital malformation of genital organs, 76.
Size of child in relation to mortality from parturition, 66.
Sketch of the Early History of Practical Anatomy, by W. W. Keen, M.D., review of, 162.
Skimmed milk, use of, as diet in disease, 19, 213.
Skin-diseases, treatment of, in England, 121.
phosphorus as a remedy in, 337.
Skin-grafting, 104.
an instrument to facilitate, 465.
Skull, fracture of, 77, 224, 457.
with intercranial hemorrhage, 283.
Smallpox in Brooklyn, 126.
on board of the Franklin, 60.
friends of, 308.
mortality from, in Paris, 67.
patients, exposure of, 407.
Smith, Eustace, M.D., on the Wasting Diseases of Children, review of, 204.
Snake poisoning in India, deaths from, 148.
in throat, 428.
Society, Medical, of Wheeling, 421.
for relief of widows and orphans of medical men, 108.
Specialism, comprehensive, 368.
Spectroscope in water analysis, 186.
Spinal affections, suspension in, 53.
cord, reproduction of, in the frog, 30.
section of, in guinea-pigs, 106.
tubercular meningitis of, 88.
Spine and Nerves, on Diseases of, by C. B. Radcliffe, M.D., review of, 224.
Spleen, albuminoid disease of, 436.
Sponge-paper, 228.
Spontaneous combustion, 147.
generation, 425.
Sprain-fracture, 243.
Staff-rank in the navy, settlement of, 279.
Staphyloma, case of, 57.
corneæ, 324.
State aid, 227.
Statistics of excision of hip-joint for caries, 14.
of hydrophobia, 14.
Stillé, Alfred, M.D., case of dilatation of veins of trunk and upper extremity, 4.
cases of unusual murmur within the chest, 249, 269.
clinical lecture, 69, 89.
Stillé, L. S., M.D., note on fibrin, 102.
on origin of fibrin, 413.
Stillé's, Dr., address, 321.
Stomach, cancer of, 229.
electrical excitation of, 274.
mucus-glands of, 386.
Stomach-pump in dilatation of stomach, 274.
Stone-fragments, removal of, by siphon-suction, 366.
St. Paul Academy of Natural Sciences, 187.
Strabismus, causes of occasional failure in operations for, 185.
convergent, 375.
Strangers' Hospital, New York, 247.
Strangulated hernia, treatment of, 1, 49, 109.
Strasburg Medical School, 407.
Strawbridge, George, M.D., clinical report, 57.
Stricture of urethra, 386, 397.
traumatic, 316.
Strychnia in chorea, 377.
detection of, in medico-forensic analysis, 105.
hypodermic injections of, in facial paralysis, 277.
poisoning successfully treated by bromide of potassium, by Cephas L. Bard, M.D., 316.
St. Thomas' Hospital, 406.
Students' supplement,—to face 218.
Subnitrate of bismuth and iodide of potassium, 426.
Sued by a Chinese physician, 348.
Sugar in urine, 327.
Suicide, statistics of, 267.
Suicides, a family of, 347.
Suit against Prof. Gross, 280.
Suits against physicians, 48.
Sulphites in pyæmia, 267.
therapeutic action of, in malarial disease, 151.
Summer-complaints of children, the bromides in, 352.
Supernumerary little fingers, 373.
Supplementary series of aortic valves, 30.
Surgeons, volunteer military, 98.
Surgery, electrolysis in, 466.
modern, 32.
a System of Practical, by Sir William Fergusson, Bart., review of, 103.
Surgical experiences during the Franco-Prussian war, 188.
instruments, antique, 187.
Suspended animation, methods for restoring, 203.
Suspension in spinal affections, by Benjamin Lee, M.D., 53.
in treatment of fracture of the leg, 209.
Swellings, external, after low fevers, 129.
Swindle, 387.
Syme testimonial, the, 448.
contributions to, 97.
Symonds, Dr. John Addington, obituary of, 298.
Sympathetic, action of, on urine, 86.
influence of the, on the organs of the face, 345.
nerves, paralysis of, 289.
Synovitis of the foot, 374.
Syphilis, hereditary, 156.
of the nervous system, 163.
of the Nervous System, by E. S. Keyes, M.D., review of, 162.
Syphilitic affections, 337.
granulations simulating epithelioma, 375.
nodule in liver, 436.
vaccinia, case of, 150.
System of Practical Surgery, a, by Sir William Fergusson, Bart., review of, 103.

Tænia mediocanellata, 445.
Tanner, Thomas Hawkes, M.D., the Practice of Medicine, review of, 28.
a Practical Treatise on the Diseases of Infancy and Childhood, review of, 422.
Tapeworm from eating raw beef, 445.
Taste, locality of sense of, 267.
Taylor, R. W., M.D., on Dactylitis Syphilitica, review of, 424.
Temperance question, the, and the medical profession, 419.
Temperature of brain, influence on, by morphia, etc., 30.
relative, of right and left sides of trunk, 86.
Testicle, chronically-enlarged, 263.
Tests for determination of death, 87.
Tetanus, 418.
acute, a case of, by Rudolfo Valdivieso, M.D., 455.
cases of, treated by calabar bean, 195, 455.
chloral hydrate in, 307.
chloroform in, 106.
idiopathic, bromide of potassium and calabar bean in, 346.
neonatorum, 166.
recovery from, under use of calabar bean, 137.
traumatic, by R. H. Johnson, M.D., 372.
Thayer, Judge, charge of, 99.
Therapeutic action of sulphites in malarial disease, 151.
Therapeutics, Handbook of, by Sidney Ringer, M.D., review of, 13.
modern, 238, 319.
Oppolzer on Special, review of, 64, 123.
the Present State of, by Dr. J. Rodgers, review of, 13.
Throat and Larynx, Affections of, by Arthur Trehern Norton, F.R.C.S., review of, 424.
Thrombosis in a puerperal woman, 76.
Thrombus, paralysis and atrophy of leg following, 436.
Thudichum's douche, ill effects of, 396.
Thyroid gland, cystic tumor of, 257.
Tibia, ununited fracture of, 12.
Tick in the human ear, 448.
Tilt, Edw. John, M.D., on Change of Life in Health and Disease, review of, 423.
Title of "Doctor," invention of, 248.
Tobacco, discussion on use of, 221.
essay on, by J. C. Morris, M.D., 211.
versus malaria, 336.
Toe-nail, inversion of, 258.
Tongue, excision of, 85.
Tonsils, treatment of enlarged, in children, 105.
Torsion forceps, 22.
Tracheotomy in diphtheria, 263.
Transactions of Academy of Natural Sciences, 12.
of Medical Society of State of Pennsylvania, review of, 103.
of State of West Virginia, 184.
Transfusion in asphyxia of a new-born child, 31.
of blood in poisoning by carbonic oxide, 278.
Traumatic rupture of the urethra, by William Hunt, M.D., 173.
Treatise on Medical Electricity, Theoretical and Practical, etc., by Julius Althaus, M.D., review of, 45.
Treatment of croup, 31.
Trephining, case of, 77.
Trophic nerves, 366.
Tubal pregnancy, 166.
Tubercle in infant, 401.
in the left optic thalamus, 447.
Tubercular meningitis following disseminated cheesy deposits in lungs, 216.
Tuberculosis and cancer, 247.
contagiousness of, 46.
in infants, 365.
Tuberculous growth in small arteries of brain, 323.
ulcers of mouth, 106.
Tumor, concealed vascular, of face, 337.
cystic, of cheek, 298.
of thyroid gland, 257.
ganglionic, 298.

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Tumor, gummy, of thigh, 167.
multilocular cystic, congenital, 302.
myxomatous, 344.
ovarian, complicating labor, 67.
"phantom," of abdomen, 449.
removal of, from bones, 465.
sebaceous, of cheek, 298.
Tumors, keloid, 347.
Turpentine, 405.
Tympanum, catarrh of, from use of Thudichum's nasal douche, by Geo. C. Harlan, M.D., 396.
Typhoid fever, walking case of, 176.
Tyson, James, M.D., on Bright's disease, 271, 290
the Cell Doctrine, its History and its Present State, review of, 13.
on intermittent hæmaturia, 429.
optics of red blood-corpuscle, 201.
therapeutic action of sulphites in malarial disease, 151.

Ulcer of stomach, 303.
syphilitic, of tongue, 317.
Ulceration of frænum linguæ in pertussis, 426.
Ulcers a cause of Bright's disease, 334.
treatment of, by skin-grafting, 104.
tuberculous, of mouth, 106.
Ulna, excision of, 66.
Universities, the three largest German, 467.
University Hospital, 247, 367.
of Pennsylvania, clinical reports from, 115, 155, 194, 296, 357, 375, 397, 417, 436, 457.
Ununited fracture of tibia, case of, 12.
Urethra, calculus impacted in, 13.
Holt's operation for stricture of, 147.
retention of urine from impassable stricture of, 35.
stricture of, 386, 397.
traumatic rupture of, 173.
Urine, action of sympathetic on, 86.
excretion of, action of coca on, 56.
a Guide to the Examination of, for the Practitioner and Student, by J. Wickham Legg, M.D., review of, 28.
hysterical retention of, 147.
incontinence of, 167.
belladonna in, 105.
of intermittent hæmaturia, 284.
retention of, from impassable stricture, 35.
specific gravity of, mode of measuring, 468.
Use of skimmed milk as an exclusive diet in disease, 19, 213.

Uterine hemorrhage arrested by heat to spine, 47.
inertia overcome by manual distention of perineum, 177.
Uterus, cancer of, 223.
Chronic Inflammation and Displacement of the, by W. H. Byford, M.D., review of, 383.
labor complicated by fibrous cord across, 115.
muscular power of, in parturition, 31.
normal position of, 107.
perforation of, with the sound, 238.
rupture of, 304.
spontaneous inversion of, 426.

Vaccinated, mortality from smallpox in the, 347.
Vaccination, by John Bell, M.D., 232.
communicability of syphilis by, 238.
compulsory, 32.
humors of, 388.
negative evidence in its favor, 127.
of pregnant women, 298.
by secondary lymph, 442.
Vaccinia, lymph of, 226.
syphilitic, case of, 150.
Vagina, erectile cancroid of, 93.
occlusion of, 88.
Vagus nerve, anæsthesia produced by pressure on, 138.
Valdivieso, Rudolfo, M.D, a case of acute tetanus, 455.
Valvular disease of heart, case of, 89.
orifices, cardiac, areas of, 67.
Variola, lymph of, 226.
Varix, case of congenital lymphatic, 347.
Vein, long saphenous, inflammation of the, 433.
Veins of trunk and upper extremity, dilatation of, 4.
Venereal diseases, the pathology and treatment of, by Freeman J. Bumstead, M.D., review of, 145.
the comparative frequency of, in America, 468.
Venesection in 1609, 337.
Dr. Barker on, review of, 285.
Vertebræ, separation of, without lateral displacement, 117.
Vienna, letter from, 10.
medical instruction in, 10.
statistics of General Hospital in, 407.
Virchow and Hartsen on the marriage of consumptives, 143.
Vitality, remarkable, of a child, 117.

Vivisections, 108.
Volunteer military surgeons, 98.
Vomiting in pregnancy, 47.
Von Graefe, operation for extraction of cataract, 57.

Wagner, death of, 307.
Waller, Dr. Augustus, F.R.S., death of, 45.
War notes, 168.
Warren prize, 307, 427.
Wasting Diseases of Children, by Eustace Smith, M.D., review of, 204.
Water, a common source of lead in drinking-, 105.
contamination of drinking-, 125.
Wear and Tear, or Hints for the Overworked, by S. Weir Mitchell, M.D., review of, 402.
Webbed fingers, congenital, 297.
Weise, Rudolf, Critique on the Parasitical Investigations of Hallier and others, review of, 45.
Welch, W. M., M.D., improper food for infants, 191.
Wellford, Beverly R., M.D., obituary of, 196.
Well-merited testimonial to Dr. Conrad, 8.
Welsh fasting girl, 47.
West Pittston disaster, the, by J. T. Rothrock, M.D., 393.
Whiskey, poisoning of children by, 156.
Wines, 47.
Winslow, W. H., M.D., rupture of bronchus in wild duck, 255.
Wolff, A., F.R.C.S., the Correlation of Zymotic Diseases, review of, 403.
Wood, H. C., Jr., M.D., clinical lecture on two cases of facial paralysis, 289.
case of splenic and lymphatic hypertrophy without leucocythæmia, 91.
lecture on therapeutics of albuminuria and chronic tubular nephritis, 149.
Woodward, J. J., Bvt. Lieut.-Col., Assistant Surgeon U. S. A., Report on Histology of Minute Blood-vessels, review of, 84.
Wound, incised penetrating, of abdomen, 96.
of neck, pressure on superior laryngeal nerve, 317.
Wounded in Paris, the, 147.

Xanthine, detection of, in urinary calculi, 466.

Yellow fever in Philadelphia, 16.
Yew-berries, poisoning by, 86.

Zymotic disease, the fungal theory of, 459.

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